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THE UNIVERSITY OF ALBERTA

THE NURSE AS A CHANGE AGENT IN PATIENT EDUCATION

by

(C)

SYLVIA PAULINE MRYGLOD

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

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EDMONTON, ALBERTA

FALL, 1986

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Supervisor

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Peggy Anne Field
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Date: October 2, 1986

DEDICATION

To my Mother, recently departed Father, brothers Allen and Nestor, and sisters Deanna and Elizabeth, in appreciation of their love, support, understanding, and encouragement.

ABSTRACT

The primary purpose of this exploratory study was to determine the actual and the preferred roles of registered nurses as change agents in patient education. Five specific research questions were examined.

This research was designed as a descriptive survey. Data were collected by a questionnaire developed specifically for this study. The items relating to the roles of catalyst, process helper, solution giver and resource linker were critically reviewed by a panel of six experts. The instrument was distributed to 175 full-time registered nurses employed at a major urban hospital in Alberta. The subjects funtioned as unit supervisors, general staff nurses, and patient teachers on selected medical, surgical, rehabilitation and obstetrical units. A type of nonprobability sampling was used to select the units from the total population. Useable returns were received from 88 nurses for a return rate of 50.3 percent.

Factor analysis employed to test the construct validity of the forty teaching activity statements used in this study did not support the use of Havelock's (1973) four roles. Consequently, all statistical analyses were on an item basis, not by combined scores within role categories. Descriptive and analytical statistical procedures were used to address the research questions of the study, and content analysis was used to analyze the open-ended written responses.

The major findings indicated that nurses performed the teaching activities fairly frequently, however, their actual performance of all teaching activities were significantly less frequent than they perceived they should be. Also, the reported frequency of performing the teaching activities appeared to be positively related to such patient teaching factors as perceived success in patient teaching, how regularly nurses included patient teaching in their nursing care, and satisfaction with current qualifications for their patient teaching role.

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Many people contributed toward the successful completion of this study by providing the necessary expertise, support and encouragement. It is with sincerest appreciation that I wish to recognize their assistance.

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Chapter 1

INTRODUCTION

Patient education "has grown into more than a nicety provided to patients for altruistic reasons" (Falvo, 1985: 8). It is considered "an indispensable ingredient in successful patient care" (Jenny, 1979: 175). The implementation of patient education can be justified partly as an economic benefit in this era of medical cost-containment, but, even more, on the conviction that good health requires individual knowledge, individual responsibility, and individual participation in making informed choices about one's life. It is recognized as a necessity for quality health care, a patient's right, a factor that may increase the efficacy of the health care delivery system, and a legal responsibility of health care professionals (Falvo, 1985). In comparison to health education which focuses on health promotion or disease prevention, patient education is usually directed to the individual who already manifests a particular disease process and has accessed the health care system.

Although definitions vary, in general, patient education refers to the educational experiences planned for and with the patient and/or family by professional personnel as an integral component of health care. The ultimate goals of organized, planned patient education activities are to help individuals acquire new knowledge, attitudes, behavior, and skills required to cope with their health problems, to promote and maintain optimal levels of health, and to function as independently as possible. This implies that the process includes strategies to facilitate the exploration of the patient's values and patterns of living to promote behavior change.

Patient education is the responsibility of many health care professionals. However, evidence exists that nurses today are doing more health teaching than anyone else (Lee and Garvey, 1978). Nurses are in a particularly advantageous position to implement patient education because of their professional education, their contact with every facet of the system, and their extensive contact with people who are likely to be particularly conscious of their health at the time nurses see them. Nurses are in an ideal position to anticipate patient teaching needs and readiness to learn as well as to coordinate and reinforce teaching done by other health professionals. It is probably safe to say that opportunities for teaching are unlimited.

With increasing research being done in the area of patient education, it becomes apparent that, in spite of teaching, patients frequently do not comply or make the choices recommended to them by health professionals. Woldum et al. (1985) found estimates of noncompliance ranging from 20 to 60 percent, although operational definitions of compliance varied among studies. Some researchers, however, cite higher rates, particularly among patients who are free of symptoms.

Many factors are associated with patient compliance/noncompliance. When all determinants are considered, it becomes apparent that there is no single or simple explanation for it. Although increased information has been found to have many positive results, information alone has not been associated with patient compliance (Tagliacozzo et al., 1974). There is a growing realization that the health professional is in a position to play an important role in influencing patient behavior and that patient education can only be as effective as the health professional's skill in conducting it. It is becoming increasingly obvious that effective patient education is a shared responsibility between patient and health professional. DiMatteo and DiNicola (1982: 276) explain that "a truly ethical approach to compliance enhancement demands the full participation of the patient in both decisions about and implementation of medical treatment."

Although interest by health professionals in patient involvement is growing and patients now receive more information, they still are often not actively involved in the teaching process (Falvo, 1985). According to Chang (1980: 43), "with few exceptions, health care professionals have focused on the patient as a passive recipient of care." D'Onofrio (1980) explains that efforts to use education to increase compliance are likely to be ineffective as long as providers maintain control over the educational process.

As Jenny (1979: 175) describes, "the major challenge of all health education is to bridge the gap between health information and health practice, resulting in a positive alteration of the person's behavior in the desired direction." When it is an expectation for the patient to understand a concept or change his behavior from one that has a detrimental effect on health to one conducive to present and future health, the educator cannot simply provide information or instruct the patient in skills needed to cope with his condition. The patient must be actively involved in the learning process. If both patient and educator identify problems, assess their causes, and anticipate barriers to change, it is more likely that educational goals will be relevant and realistic, that employed methods will be acceptable, and that there will be a commitment to planned activities and goals.

According to Jenny (1979: 180), "perhaps the most significant change required in nurses to be effective facilitators of patient learning is their ability to perceive themselves in a new role, in a new relationship with the patient." The central concern of this role is helping the patient use his own power to maintain control over certain aspects of the management of his health problem, and encouraging him to be as responsible as possible for his future health seeking behaviors. Levine and Sorenson (1984: 228) suggest that "because many harmful health practices are so inveterate and deeply embedded in the normal life of people, it is necessary to consider the role of the health professional as change agent and the types of general strategies that are available."

To strengthen patient education research, there is a need to study the roles nurses assume in this area of nursing practice. A review of the literature revealed a lack of conclusive theory on how to implement change and few conceptual models of change that have, as yet, been tested with patient education. Bailey (1983: 37) indicates that change theory offers "a rich appreciation of the client's needs."

The purpose of this study was to determine the actual and preferred roles of registered nurses as change agents in patient education.

Havelock's (1973) conceptual model for examining the roles of the patient educator as change agent provided a framework for this study and will be discussed in chapter two. The model identifies four primary ways that a person can act as a change agent: (1) as a catalyst, (2) as process helper, (3) as solution giver, and (4) as resource linker.

Statement of the Problem

The purpose of this study was to determine the actual and the preferred roles of registered nurses as change agents in patient education.

The specific research questions were:

1. What are the differences in the perceptions between the actual and preferred change agent roles of registered nurses as catalyst, process helper, solution giver and resource linker?
2. To what extent are the perceptions of the change agent roles related to such personal and professional characteristics of nurses as age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience?
3. What are the differences in the perceptions of registered nurses of such patient teaching factors as self-perceived competence, importance and success in patient teaching?
4. To what extent are the perceptions of patient teaching factors related to such personal and professional characteristics of nurses as age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience?
5. To what extent are the perceptions of the change agent roles related to such factors as self-perceived competence, importance and success in patient teaching?

Significance of the Study

Although theoretically nursing has long been committed to patient education, available evidence does not indicate that this commitment has always been actualized. Patient education often appears "to be sporadic, spontaneous and a victim of other demands on nurses' time" (Ackerman et al., 1981: 37). Bille (1981) indicated that organized teaching plans are often inadequate or nonexistent. Cohen (1981) and Redman (1984) found in their reviews of how the nurse's education role is perceived that most nurses accept having a health education role, however, there has been confusion about the extent and nature of the activity required, and uncertainty about how the nurse's role complements or differs from the doctor's. According to Redman (1984: 280), "since in the past, nurses largely followed medical thought and practice, which may not have been supportive of patient education, some may feel a lack of confidence in their teaching skills." In recent years, instruction in communication skills and in elements of a helping relationship basic to teaching has undergone considerable change in nursing education. Recent graduates have been exposed to and educated in a concept of their role that embodies patient teaching as central to professional nursing.

This study assessed the nature of current patient education from the nurses' perspective. Data analyses provide the opportunity to assess the discrepancies between the ideal and actual process and change strategies used in assisting patients and families. The results of the study not only add to the existing knowledge in the area of patient education, but they should facilitate a better understanding of the roles of patient educators as change agents. They also may help to clarify the effects of certain variables on the roles patient educators assume. Such a retrospective study can provide a foundation or guide for improved practice.

The information gained from this study will be of interest and value, not only to nurses, inservice educators, nursing administrators, nurse educators, but to other health professionals interested in patient education.

Definition of Terms

Change agent: an individual who facilitates planned change in a goal-oriented direction.

Role: the manner in which a person actually functions or would prefer to function.

Catalyst: an individual who prods people to change, who stimulates deliberate and conscious problem-solving.

Process helper: an individual who helps in the process of problem-solving, that is, in recognizing and defining needs, diagnosing problem(s), setting objectives, acquiring relevant resources, selecting or devising solutions to the problem(s), implementing the solution selected, and evaluating the solution to determine if it satisfies the needs for which it was selected (Havelock, 1973).

Solution giver: an individual who has definite ideas and takes the initiative in suggesting solutions to the problem.

Resource linker: an individual who "brings people together, who helps clients find and make the best use of resources inside and outside their own system" (Havelock, 1973: 9).

Patient teaching: a dynamic process designed to meet the patient's specific learning needs, interests, and capabilities, and offered as an intricate part of the patient's total health care. For the purposes of this study, patient teaching and patient education were used interchangeably.

Delimitations

1. The study was delimited to full-time registered nurses who worked with adult patients on medical, surgical, obstetrical and rehabilitation units at one hospital.
2. The study was delimited to an examination of the role of registered nurses as change agents in patient education using the conceptual model proposed by Havelock (1973).

Limitations

1. The study was limited methodologically to individual responses to a questionnaire instrument.
2. The data were limited to the perceptions of respondents. No attempt was made to validate these perceptual data with other indicators.
3. The interrelationships among the independent variables were not examined.
4. The findings of this study are limited to the population that was investigated on selected units in one hospital.

Assumptions

In this study it was assumed that:

1. All subjects responded openly and frankly to the instrument.
2. Patients on the selected units required teaching by registered nurses.

Organization of the Thesis

This thesis consists of five chapters. The first chapter includes an introduction to the problem, the statement of the problem and specific research questions. The significance of the study, definition of terms, assumptions, limitations and delimitations are also discussed.

A review of the theoretical and research literature relating to patient education and change theory is presented in the second chapter. The conceptual framework used in this study is also discussed.

In chapter three the research design and methodology are described in relation to the selection of the population, development of the instrument, the research methodology, and analysis of the data.

Chapter four includes a description of the personal and professional characteristics of the respondents, an analysis of the data on the basis of the five research questions, and a content analysis of an open-ended question.

The final chapter contains a summary of the findings, as well as the conclusions and implications.

Chapter 2

REVIEW OF RELATED LITERATURE AND THE CONCEPTUAL FRAMEWORK

The purpose of this chapter is to review literature relevant to the study of the roles of nurses as change agents in patient education. The literature will focus on the following areas: (1) developments in patient education, (2) perspectives on patient education, (3) benefits of patient education, (4) nurses' role perceptions and performance, (5) the change agent and change, and (6) the conceptual framework of this study.

Developments in Patient Education

According to Gilson-Parkevich (1979), patient education has been given formal recognition only in the last few decades. In 1964 the American Medical Association sponsored the First National Conference on Health Education Goals. This conference identified two primary objectives for health education:

1. to educate the individual to assume responsibility for maintaining personal health and
2. to develop responsibility for participation in community health programs (McCormick and Gilson-Parkevich, 1979: 5).

The President's Committee on Health Education, created in 1971, recommended that skill in providing health education be an essential part of the training and continuing education of all health professionals, and suggested that systematic research and evalution be included in all educational programs within the health care delivery system (Chaisson, 1980).

In a 1974 position statement, the American Hospital Association identified the following role of hospitals in patient education:

> the process of promoting, organizing, implementing, and evaluating health education programs, as well as planning with other health care institutions and community agencies to define the role and responsibility of each organization to meet the health education needs of the populations they serve (McCormick and Gilson-Parkevich, 1979: 8).

The Blue Cross Association released its White Paper on Health Education in 1975. The publication endorsed patient education and urged third party reimbursement for patient education costs (McCormick and Gilson-Parkevich, 1979).

In 1976, President Ford signed into law the National consumer Health Information and Health Promotion Act (P.L. 94-317). This law provides for a national program of "health information, health promotion, preventive health services, and education in the appropriate use of health care" (McCormick and Gilson-Parkevich, 1979:8).

In Canada, a renewed interest in health education opportunities was evident in the changing emphasis in health care encouraged by Lalonde:

> The goal will be to ensure that . . . people will be brought to understand their physiology, that they obtain information on the importance of healthy lifestyle, especially physical activity and nutrition (National Conference on Nurses, 1973: 105).

In recent years, various patient bills of rights have emerged. Such statements recognize the rights of patients to expect and to receive appropriate standards of care, and further recognize the rights of patients to receive health education. The American Hospital Association adopted its Patient's Bill of Rights in 1972. The National Association of Children's Hospitals and Related Institutions (NACHRI) adopted The Pediatric Bill of Rights in 1974 (McCormick and Gilson-Parkevich, 1979). The most significant document published in Canada was the Consumer Rights in Health Care resolution of the Consumers' Association of Canada (Storch, 1980).

The Joint Commission on Accreditation of Hospitals in the United States has also emphasized the rights and responsibilities of patients. The rights of patients to "information" is addressed in its written accreditation standards (McCormick and Gilson-Parkevich, 1979).

In both Canada and the United States, patient education responsibilities are explicitly included in the professional practice acts for medicine and nursing. Failure to insure that the patient is adequately informed about his care places both professionals and hospitals in danger of liability.

There have been significant changes in medical ethics basic to patient education. According to Redman (1984), a new version of Principles of Medical Ethics was approved in

July, 1980 by the American Medical Association's House of Delegates. The new statement indicates that a physician shall make relevant information available to patients and the public. It implicitly recognizes rights of patients and the role of the lay person in determining what is ethically appropriate in the professional role. Traditionally, honesty with patients was considered to be secondary to a more fundamental commitment to protect the patient from harm.

These developments, together with a greater consumer awareness, increases the accountability of health care organizations and providers.

Perspectives on Patient Education

Patient education may be viewed as an evolving body of theory and concepts. In the past, patients were viewed primarily as passive recipients of health care. As Falvo (1985) explained, generally, neither patients nor health professionals expected patients to play an active role in their health care. In most instances, both patients and health professionals expected that health professionals were the ultimate authority and, therefore, would make the final decision about what was best for patients.

DiMatteo and DiNicola (1982: 263) indicate that "our society is witnessing a general decline in the old-fashioned kind of professionalism that placed all power in the hands of the professional and required that the patient merely submit to and follow orders." An increasing emphasis is being placed on the importance of actively involving patients in professionally provided health care. As Coutts and Hardy (1985: 40) state, "health professionals have come to accept not only that the consumer ought to be involved in his own care, but that he has to be, and is, involved." The necessity has arisen in part from the nature of modern disease and treatment. Since there may not be a single right course of treatment but a number of options, the choice is best made by physician and patient together. Shortened hospital stays and an increase in long-term illnesses and disabilities require that both the patient and family possess a high degree of understanding of the illness and its treatment. Also, consumers have a greater desire to be informed and to participate in their treatment process. A recent reemphasis is on personal responsibility, self-care, and self-determination regarding matters of health.

The idea of patients actively participating in their care is not new. As DiMatteo and DiNicola (1982) indicate, taking issue with physician dominance, Szasz and Hollender in 1956 suggested differences in interaction styles. The "mutual participation model" was proposed as most effective in managing long-term or chronic illness conditions. DiMatteo and DiNicola (1982: 263) further describe that in this model "patients participate in major decisions regarding their own health care and they contribute crucial information for the development of the most appropriate format for their care." The goal is for the practitioner to "help the patient help himself." In the past one was considered vaguely suspect, perhaps, even incompetent for practicing this philosophy, however, now the opposite seems to be true.

Nurses have differing perceptions regarding the nature and limits of their patient education role. According to Coutts and Hardy (1985: 21), there are "those who assume that they have a duty to use persuasive strategies to help people learn new patterns of behaviour, and those who assume that health education is aimed at assisting rather than persuading people to change." Often nurses have ethical conflicts about creating behavior change in patients.

A number of factors presumably determine how patient education is practiced. As Levin (1978: 170) describes,

> The precise boundaries of activities characterized as patient education . . . may be determined more by the realities of a particular institution than by definitions or the idealism of health education philosophers. Time, values, place, personalities, priorities, and sometimes the patients themselves profoundly influence what ultimately emerges in practice.

Some institutions employ specially prepared nurses who do all the patient teaching in one area, such as diabetes management. Bille (1981) feels that when an aspect of nursing care gets labeled a specialty area, the general staff nurses develop an inability even to recognize the need for care in the area. In reviewing the literature, Ackerman et al. (1981) found that work conditions and on-the-job interaction influenced nurses' health education behavior more than did their attitudes or level of educational preparation.

Most nurses writing on the topic (Narrow, 1979; Rankin and Duffy, 1983; Redman, 1984, for example) indicate that the nurses' patient/health education role arises as part of the usual nurse-patient interaction. Each interaction is an opportunity for the nurse to build the trust and rapport necessary for successful patient education. The literature stresses the importance of patient assessment of need and readiness (DuBrey, 1982; Redman, 1984), ascertaining whether patients and nurses identify and agree on the same problems which are amenable to nursing intervention (Roberts, 1982), planning or goal setting, implementation, evaluation of the teaching-learning process (Pohl, 1968; Redman, 1984), process-oriented patient education (Bille, 1983; Rankin and Duffy, 1983), and the application of principles of learning, particularly reinforcement (Friedland, 1976; Pohl, 1968).

Coutts and Hardy (1985: 138) identify two aspects that the nurse's role in assessing needs can encompass: firstly, the nurse must comprehensively assess the needs of patients in her/his care, always being aware that their concept of need may differ from the nurse's; and secondly, the nurse "must be capable of defining health education needs in general, in order to be able to make a case for resource allocation."

Bille (1983) identifies one of the most important roles of the nurse in motivation as helping the patient to recognize the gap between what his situation is and what he wants it to be. A planned process is suggested to identify and focus on specific learning needs and concerns, a plan that is compatible with the patient's priorities and lifestyle. Ideally, the learner should be involved in all stages of the processs to help identify what knowledge, attitudes and behaviors he needs to acquire in relation to his health status. As Jenny (1979: 176) indicates, the nurse should provide "a supportive and accepting interpersonal milieu in which the patient and his family can utilize the nurse's interpretive abilities and knowledge resources."

As Falvo (1985) describes, the nurses' role is to enable patients to act on their own behalf, to assist with the practical problems of carrying out recommendations, to help patients to be aware of alternatives, and to support them in the general acceptance and integration of new knowledge. In order to respond to specific patient needs, nurses should also function as referral agents and provide for continuity of education for the patient following discharge.

As Falvo (1985: 2) indicates, the health professional "should be a facilitator of learning and problem solving rather than only a teacher of facts." According to Coutts and Hardy (1985), an undue emphasis upon rationality and the assumption that expert authority will be acknowledged, led, until recently, to nurses and doctors relying on the information-giving approach to patient education.

A review of the literature revealed that nurses have placed a greater emphasis on the content of health education activities than on analytic frameworks, process, or evaluation. The teaching content tends to be disease specific. The two most frequent target populations for patient education by nurses appear to be adults with health problems requiring medical or surgical interventions and women with maternal and infant health concerns (Ackerman et al., 1981). Redman (1981) indicates that evaluation does not appear to be commonly done and very rarely is it done for the full length of time that a particular teaching intervention has its effects. Most evaluation is seen as determining the degree to which *intended* effects have occurred. It is rare that unintended effects are monitored, even though they can be more beneficial or more devastating than intended effects.

In reviewing published reports on past efforts in patient education, Chaisson (1980: 3-4) found the following observations of commonly made mistakes:

1. telling persons what we think they should know, rather than what they are ready or willing to learn;
2. failure to individualize educational efforts in consideration of the person's personal background, attitude and motivation;
3. failure to assess the patient's knowledge before beginning an educational effort;
4. lack of coordination of the efforts of professionals who are engaged in the teaching effort;
5. teaching by individuals who are untrained in educational principles, methodology and evaluation; and
6. provision of education on an incidental, accidental or ad hoc basis, rather than in a carefully evaluated manner.

Benefits of Patient Education

Research has substantiated many benefits of patient education. For example, findings from several projects indicate that when patients are adequately informed and included in the educational process concerning their own care and treatment, they have fewer hospital or clinic readmissions and shortened lengths of hospital stay (Lindeman and Van Aernam, 1971; Putt, 1970). Devine and Cook (1983) concluded from their review of 49 controlled studies that regardless of the type of hospital, surgery, age, or gender of the patient, preoperative education reduces length of stay by 1.07-1.33 days.

While accumulating evidence on the benefits of psychological preparation consistently emerge, precisely how information and suggestions for specific coping enhance the outcomes of patient care remains unclear. Reading (1979), after appraising the research in this area, offered the following explanations: (1) information reduces patient anxiety (information on sensations alone may reduce or promote distress depending upon the patient's personality characteristics and circumstances; information emphasizing practical details rather than sensations may result in less distress; and coping instructions appear to consistently result in reduced anxiety); (2) information reduces uncertainty and ambiguity (although it has been suggested that some patients may respond better by adopting an avoidant coping style); (3) information enhances feelings of personal control resulting in greater stress tolerance and the capacity to reduce feelings of helplessness commonly associated with hospitalization; (4) information can improve the patient's attitude toward the procedure (focusing on positive aspects rather than the negative effects of the experience); and (5) the provision of instructions utilizing established techniques for coping with pain may have wide implications in terms of both reducing suffering and facilitating healing.

Many research studies have demonstrated that information alone is seldom capable of significantly changing beliefs or influencing behaviors. DiMatteo and DiNicola (1982) indicate that many health professionals recognize this and try instead to motivate patients through scare tactics. Fear-arousing messages most often do not work and may actually reduce the chances that the patient will change. Research findings show that threatening communications will produce a change in belief only when the patient is convinced that his health is in danger, that adhering to the recommended action(s) will reduce the threat to his health, and that he is fully capable of carrying out the recommendations.

The quality of the interaction between patient and family and the health professional have been suggested as having a significant influence on the ensuing patient behavior (Falvo, 1985; Friedman and DiMatteo, 1982; Jenny, 1979). A positive influence appears especially strongly related to the health professionals' communication and explanatory skills. Becker and Maiman (1980) indicate that adherence is greater when the health professional asks about and respects all the patient's concerns, when both patient and health professional substantially agree on specifics of the regimen, and when the patient's expectations have been met. Likewise, Falvo (1980) noted a greater compliance if patients perceived the physician as listening to their concerns, explaining their condition understandably, and considering their feelings and concerns when treatment was planned. On the other hand, patients' nonadherence to medical regimens have been associated with:

> (1) receiving advice that does not fit with values or lifestyles; (2) receiving ambiguous or conflicting communications from health professionals; (3) receiving less information than expected; and (4) not understanding advice that is given (Mathews et al., 1979: 33).

Magill et al. (1986) have found that the human elements of caring, empathy and encouragement may help a patient to learn more than all the available information and teaching aids. These findings suggest that compliance rates can be improved by making appropriate changes in provider-patient interaction.

Becker and Maiman (1980) reviewed studies in which patient-provider contingency contracts were used to enhance patient compliance. They indicated that contingency contracting significantly increased patient adherence even among previously noncompliant patients. A problem with most contingency contracting, however, is that long-term changes are not likely to result.

There appears to be a paucity of research on the acquisition and self-maintenance of healthy, long-term, self-reinforcing behaviors. According to DiMatteo and DiNicola (1982: 208), "one important requirement for such change is commitment that follows from the individual's perception that he or she is free to act otherwise . . . The perception of personal responsibility appears to be at the core of true commitment." Social support, particularly from the family, seems to be a necessary but not a sufficient condition for behavior change and maintenance (Becker and Maiman, 1980). Of the 21 studies Haynes et al. (1979: 462) cited that examined family support, fifteen showed a significant positive effect of family influence on patient's behavioral compliance. In reviewing studies of patient's perceptions of barriers to their behavioral compliance, DiMatteo and DiNicola (1982) found that lack of family support was cited as extremely important.

Strecher et al. (1986), in their review of the literature, found a consistently positive relationship between self-efficacy and health behavior change and maintenance. They suggest programs designed to influence health practices may be improved through directly targeting the enhancement of self-efficacy.

There have been a variety of models proposed in recent years to explain health behavior. Among the most important influences in health research have been the Health Belief Model of Becker and his associates, Fishbein and Ajzen's Theory of Reasoned Action, and the concept of Health Locus of Control. The Health Belief Model has had the most research support of all the models involving beliefs, however, it "does not by itself provide a sufficiently complete basis for understanding health behavior and for planning intervention strategies" (DiMatteo and DiNicola, 1982: 138).

The Health Belief Model is perhaps the most systematic and theoretically focused effort to understand preventive health behavior (Levine and Sorenson, 1985). It attempts to explain and correlate a variety of factors that influence a person's willingness to obtain health care and to comply with the resulting recommendations. As Becker et al. (1979:78) specify, it is "based on the decision-making concepts of valence (or attractiveness of the goal to the individual) and subjective probability (or personal estimate of likelihood of goal attainment)." The individual's health behavior is dependent upon his perceptions of susceptibility to the particular illness or condition, the severity of the consequences of contracting the condition, and the potential benefits or efficacy to be realized by engaging in the particular health action as opposed to the barriers or costs of initiating or continuing the advocated behavior. The model stipulates that an internal or external "cue to action" makes the individual consciously aware of his feelings about the health threat.

Role Perceptions and Performance

As early as 1918, the National League of Nursing Education in the United States noted the importance of preparing nurses for health teaching (Cohen, 1981). According to Redman (1984: 2), the 1937 National League of Nursing Education curriculum guide for schools of nursing indicated that "the nurse is essentially a teacher and an agent of health in whatever field she may be working." The extension of the place of teaching in nursing is characteristic of statements made at different times in this century. Actual translation of these thoughts into nursing education and practice seems to have occurred slowly.

Pohl (1965) found in her study of a random selection of 1500 American Nurses' Association members that there was confusion among the nurses regarding their teaching role and feelings of a lack of preparation to assume this role. The modal nurse was a diploma graduate with no college credits and no courses in principles or methods of teaching. One third of the respondents reported they had no preparation for the teaching they were doing, and only one fifth felt they were ready for the task. There were indications that nurses who had taken courses in teaching had clearer concepts about it than did those who had not. In a recent survey of 390 practicing nurses, it was found that only 53 percent said their basic education included adequate health education content (Ackerman et al., 1982).

A survey conducted on 200 baccalaureate nursing programs accredited by the National League for Nursing indicated that health education in the curriculum was superficial and that there were few clinical objectives to direct students' practice in health education. The 36 schools that gave evidence of health education showed little agreement on what health education encompassed or what reasonable expectations were for the baccalaureate nursing students. Ackerman et al. (1982: 22) added that

> while there can be no generalization of these findings to baccalaureate nursing education, serious questions are raised concerning the thoroughness with which nursing educators are treating the health education component of the baccalaureate curriculum.

In studying the effects of nurses' knowledge of teaching-learning principles on knowledge of coronary care patients in both acute and intermediate areas, Murdaugh (1980) found that nurses possessed the general knowledge about patients' disease and treatment regimen, however, their baseline knowledge of teaching-learning principles was inadequate to effectively teach patients. A pretest administered to determine nurses' baseline knowledge of teaching-learning principles revealed a mean score of 56 percent. Following a six-session course designed to introduce the practicing nurse to the teaching-learning process, there was evidence that nurses were better able to teach patients and patients learned more. A major teaching obstacle reported was a lack of time.

A survey by Palm (1971) showed that 59 percent of the 151 nurses studied gave greater importance to the professional nurse teaching in non-emergency situations than to physical aspects of care, supportive emotional care or liaison activities. Hover (1966) reported that the baccalaureate degree nurse selected patients requiring teaching and supportive care twice as often as the diploma nurse. In addition, the opinions and goals of diploma graduates working toward degrees in nursing approached those of the baccalaureate degree nurse.

In a 1977 National Survey of Registered Nurses, 61 percent of the registered nurses reported that their practice included "instructing and counseling patients and families in areas of health promotion and maintenance including involving patients in planning their own care" (Moses and Roth, 1979: 1753). In the same study, 66 percent of the nurses reported "instructing patients in the management of defined illnesses." The nurses were not asked to indicate specific actions or the level or depth of these activities.

According to Woldum et al. (1985), the results of a recent voluntary questionnaire taken by 134 health care providers indicated a strong identity as a patient teacher by the professional disciplines represented in the sample (117 RNs, 7 MDs, 10 others). Almost 90 percent of the respondents were in moderate or strong agreement while five percent disagreed that health education was one of the most important aspects of their role with patients and that their contacts with patients and their families were incomplete if they did not include some type of teaching. The majority of the respondents were nurses working in intensive care units, medical-surgical, or pediatric areas. "All but 3 of the 134 respondents described the extent of their experience as a patient educator as moderate to extensive" (Woldum et al., 1985: 5).

A 1978 nationwide survey of patient education in hospitals in the United States found that 62 percent of those responding had inpatient education programs and another ten percent reported programs in the planning stages, an increase of nine percent over a 1975 survey (Redman, 1984). A 1981 survey conducted by the American Hospital Association revealed that 60.5 percent of all hospitals in the United States had designated a person responsible for the coordination of inpatient education (Bartlett and Manzella, 1985).

In implementing an MI teaching program, McCulloch et al. (1980) reported encountering four major categories of problems. Physicians saw education programs as a threat, materials were inefficiently organized, nurses were reticent to teach due to a lack of familiarity with teaching tools and methods, and teaching was not viewed as a priority in the critical care setting. It was found that during the highest census month, completed patient teaching dropped as low as fourteen percent, whereas during the lowest census month, 80 percent of teaching was completed. With a change in the organization of teaching, at the end of four months completed teaching ranged from 70 to 80 percent even in periods of high census.

In a recent case study conducted to describe and analyze the development and implementation of a teaching program for patients with a chronic illness on a medical unit, Elliott (1985) discovered some unanticipated findings. She found that nurses had difficulty identifying what constituted the nurses' role as opposed to the doctors' or physiotherapists' roles in patient care and in the teaching program. The two diploma and two post-RN baccalaureate degree nurses who volunteered to teach in the program did not understand even the basic tenets of teaching or of mounting a program. Prior to becoming involved in the program, the patients, some of whom had had the chronic illness for over twenty years, had received little structured education about their disease. Other patients did not appear to know anything about the disease nor about how to link with support groups. Elliott found that the doctors and nurses wanted patients to comply with their prescribed regimens, however, they did not solicit information about what the patients wanted and needed. Elliott (1985: 501) added that "the patients wanted to be supported to live the kind of lifestyle which they chose, not one which complied with the vision of the health professional." The third unanticipated finding that Elliott (1985: 501-2) discussed was that

> While the implementers recognized the multidisciplinary components of the teaching program, they did not think of implementation as an interdisciplinary endeavour ... The doctors talked about maintaining control of patient care but allowing any other discipline to coordinate and teach in the program as long as that discipline functioned within clearly defined parameters.

The Change Agent and Change

The term change agent is used interchangeably with such other terms as consultant, trainer (Lippitt and Lippit, 1978), and facilitator (Bailey, 1983; Douglass and Bevis, 1983). A review of the literature indicated that little is known about the individual acting in the change agent role. Lippitt and Lippitt (1978: 91) note that "there have been ... few attempts to classify the competencies of an effective consultant" and that this is an issue which must be addressed.

Brooten et al. (1978: 81) describe the change agent as "a professional who relies on a systematic body of knowledge about change to guide the process, who possesses interpersonal competence, and who has been given (or has assumed) a mandate to help plan and accomplish change." Olson (1979) adds that the nurse as a change agent needs to be "people-oriented." Lancaster and Lancaster (1982: 3) feel that "the nurse who seeks to implement a change-agent role must understand human motivations, needs, and roles and must also be able to make decisions carefully and quickly." Ottaway (1983: 372) found in reviewing 35 reports of defining and research on change agents that most studies seemed to agree "that the change agent should be in an invited collaborative situation while some advocate an initiated proactive position in relation to the client system."

The nature and process of change is still not well understood, although theories and models have been developed attempting to explain it. The term "change" is generally referred to as "planned change" in the literature. Planned change is described as a conscious, deliberate, collaborative process in which goals are set and strategies are clearly defined by a change agent and a client system. The relationship is conceived as being temporary and equal in power (Brooten et al., 1978). Douglass and Bevis (1983:316) explain that "the process of changing deals with making alterations by choice and deliberation and is distinctly different from change by indoctrination, coercion, natural growth, and accident." Chin and Benne (1976: 23), in discussing the normative-re-educative strategy for effecting personal change, state that

> Change in a pattern of practice or action . . . will occur only as the persons involved are brought to change their normative orientations to old patterns and develop commitments to new ones. And changes in normative orientations involve changes in attitudes, values, skills, and significant relationships, not just changes in knowledge, information, or intellectual rationales for action and practice.

Bailey (1983: 37) indicated that change as a phenomenon has received recent attention in patient education because of the "growing acceptance of longterm planning and feelings of social responsibility in our society," however, one limitation to its application in practice is the quality and quantity of time allotted for implementation.

Current literature in which there is discussion on the implementation of change in nursing practice focuses on "the need for change agents to understand theories of change and to equip thenselves with the requisite skills and strategies to implement change" (Webb, 1983). These discussions have generally been theoretical in nature. Few studies have been conducted to test the application of traditional change theory in health care settings, and few, if any, factors were identified which supported or expanded theory when it was applied. Specific studies whose principal purpose was the investigation of the roles of nurses as change agents in patient education could not be located.

A specific form of behavioral change associated with the patient education process is compliance. According to Woldum et al. (1985), factors that can influence patient compliance may be internal to individuals and their support systems, may involve the relationship developed with health care providers, and/or may be related to the nature of the individual's illness or prescribed treatment. Interestingly, such sociodemographic features as age, gender, marital status, education and social class, appear to provide little information about an individual's likelihood to comply (Conrad, 1985).

As Conrad (1985) indicated, the less-developed patient-centered perspective where patients are "active" in their treatment rather than "passive and obedient recipients of medical instruction," is rarely mentioned in studies of compliance.

Conceptual Framework

Havelock (1973) provides a theoretical model for planned change facilitated by an outside resource, the change agent (Figure 1). He stresses the importance of establishing a helping relationship with the client system. He suggests a sequence of stages for change agents to follow in bringing about change. The stages described are: (1) building a relationship, (2) diagnosing the problem, (3) acquiring relevant resources, (4) choosing the solution, (5) gaining acceptance, and (6) stabilizing the innovation and generating self-renewal. Havelock's (1973: 12) orientation in developing these stages was " ... problem-solving by and for the user through effective use of resources." It is noted that the stages may not occur in a precise, sequential order, but may occur simultaneously. It is important that the client and the change agent are in agreement about the need for change and that the client is involved in the process. Ultimately, the role of the change agent is to facilitate planned change.

Havelock defines the change agent by role in the change process. The first change agent he identified, the catalyst, prods people at the most opportune moment for change. "By making their dissatisfaction known and by upsetting the 'status quo,' they energize the

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Figure 1: Four Ways to be a Change Agent

Source: Havelock, R. G.
The Change Agent's Guide to Innovation in Education.
Englewood Cliffs, N.J.: Educational Technology Publications, 1973, p. 8.

problem-solving process; they get things started" (1973: 8). Once the process starts, other roles are required. "Many people who want to bring about change have definite ideas about what the change should be; they have solutions and they would like to have others adopt those solutions" (1973: 9). These individuals are referred to as solution givers. An important and often neglected role is that of helper in the processes of problem-solving, or process helper. As Havelock (1973: 9) explains, "because most clients are not experts on the 'HOW TO' of change, they can be helped greatly by people who are skilled." The fourth way an individual can act as a change agent is as a resource linker. According to Havelock (1973: 9), "a very special and underrated change role is that of the 'linker,' i.e., the person who brings people together, who helps clients find and make the best use of resources inside and outside their own system." Havelock does not see the four primary roles as mutually exclusive and feels some change agents can be catalysts, process helpers, solution givers, and resource linkers all at the same time.

Havelock's model of change shares problem-solving characteristics with the teaching process. Cobb-McMahon et al. (1984) used Havelock's model to describe how the community health nurse functions as a change agent to assist clients to achieve an ideal model of wellness. Examples were provided of how the community health nurse functions as a catalyst, process helper, solution giver, and resource linker. The stages of change discussed were: assessment of the individual's potential health problems and need for change; assessment of readiness for patient education; understanding the client's reluctance to change; developing an awareness of the need for change; mutual agreement on the need to change; identifying and exploring ways in which the change may be accomplished, implementation of the plan; and evaluation.

In summary, the nurse and/or other health professionals can be considered to function as change agents. The nurse as a change agent in patient education facilitates patients' understanding of their condition and treatment, facilitates patients adaptation to the sequelae of their present disease process, and assists individuals to attain their maximum health potential. Falvo (1985: 23) explains that "to reach this goal, patient education cannot happen by chance; it must be part of a process based on an organized and structured sequence of events between patients and health professionals." It must be designed to meet the needs of the learner, directed not only toward increasing knowledge, understanding, and motivation, but toward helping the patient improve decision-making and coping skills. As Coutts and Hardy (1985: 48) suggest, it should "encourage accountability in both teacher and learner."

In conclusion, the present challenge is not whether patient education should be initiated, but rather that efficiency and effectiveness are stressed. As Jenny (1979: 176) explains, "health professionals must, if they are truly committed to patient education, move on, from a concern with 'content' or what to teach, to 'process' or how to teach it." Patients' knowledge, skills and problem-solving abilities form a self-care asset to be developed.

Chapter 3

RESEARCH DESIGN AND METHODOLOGY

In this chapter, the research design and methodology are discussed in terms of population selection, instrument development, data collection and treatment of the data.

Population Selection

Selection of the Institution

Through discussion with selected faculty members from the Faculty of Nursing and the Department of Educational Administration at the University of Alberta, it was agreed that the researcher conduct the study at a major urban hospital in Alberta. The specific hospital was chosen as it was accessible and considered to be an appropriate setting to assist in answering the research questions. Only one hospital was selected because of the time that would be involved in obtaining permission and ethical clearance to conduct the study.

The Director of Nursing and other selected nursing administrators at the hospital were contacted to discuss the nature of the study and to establish the feasibility of conducting the study. A need for the study was identified and enthusiastic support received.

Selection of Individual Respondents

Full-time registered nurses functioning as unit supervisors, assistant unit supervisors, general staff nurses, and patient teachers were included in the sample for this study. All nurses on selected medical, surgical, obstetrical and rehabilitation units at a major hospital in an urban setting in Alberta were invited to participate in the study. Nurses from critical care areas or pediatrics were not included in the study to eliminate the influence of potentially confounding variables.

A type of nonprobability sampling was used in the selection of the nursing units. The Director of Nursing Education and Research was consulted for suggestions on comparison groups of medical, surgical, obstetrical and rehabilitation units. In making the decision to include selected units in the study, units were matched on such characteristics as size, number of registered nurses, and approach to patient care assignments to form four comparison groups. Three medical, three surgical, two obstetrical, and three rehabilitation units were selected from the total population. One of the three surgical units selected was identified as orthopedics, but for the purpose of this study it was considered a surgical unit.

There is a risk of sample biases in the sample selected. According to Polit and Hungler (1983: 413),

> The extent to which sampling bias is likely to give cause for concern is a function of the homogeneity of the population. If the elements in a population were all identical with respect to some critical attribute, then any sample would be as good as any other

and systematic biases would matter very little. An attempt was made to select a sample with a reasonable degree of homogeneity.

Development of the Instrument

For the purpose of this study, an instrument was required to measure the actual and preferred roles of registered nurses as change agents in patient education. A search to determine if existing instruments could be used proved to be unsuccessful. The researcher developed a survey instrument for this study.

The questions relating to personal and professional characteristics of nurses and to patient teaching factors were generated by the investigator based on a review of the literature, and were modified from instruments used in evaluation studies of patient education.

During the preliminary phase, 68 statements of teaching activities were developed relating to the roles of catalyst, process helper, solution giver and resource linker. These statements were derived from activities described in the literature and from the conceptual definitions of the four roles.

Validation of the Instrument

Validity, or the extent to which the questionnaire measures what it is supposed to measure, was a major concern. To ensure content validity, the 68 items relating to the roles of catalyst, process helper, solution giver and resource linker were submitted for review and critique to a panel of six experts. Five of the experts were faculty members in Nursing and the sixth expert was a faculty member in Educational Administration. The experts were told what the questionnaire items were intended to measure. They were asked to rate the clarity and appropriateness of each item on an eight-point scale, and provide suggestions about any areas of concern. (A copy of the review panel rating form is included in Appendix A.) All six faculty members responded to this request. From their comments and suggested refinements, ten items they judged to most clearly reflect the role were chosen for each of the four roles described in the questionnaire.

Pilot Study

To test the revised instrument, twenty registered nurses on a gynecology unit at the study hospital were asked to assist with the pilot study. Seventeen questionnaires were completed and returned. Most of the items were acceptable as distributed, and only minor wording changes were made to increase the clarity of the other items. For instance, some nurses questioned what was meant by change process skills. This was changed to read "change theory."

The Final Instrument

The final form of the questionnaire that was developed is included in Appendix A. The questionnaire contained three parts: Personal and Professional Data, Patient Teaching Activities, and Patient Teaching Factors.

Part I of the questionnaire was designed to collect personal and professional data. The information was used to classify the respondents according to age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience.

The items in Part II described some typical teaching activities relating to the four roles of catalyst, process helper, solution giver and resource linker. There were a total of forty items, ten for each of the four roles (See Table 1). The items were randomly ordered in the questionnaire, not separated into the four change agent roles. The respondents were asked to rate each item two times on a Likert-type scale, indicating how frequently they actually performed the teaching activities during the last week they worked, and secondly how frequently they thought nurses should perform the teaching activities. The following five-point scale was used to rate each item:

1. never, 2. infrequently, 3. some of the time, 4. most of the time, and
5. all of the time.

The actual/preferred scale that was used yielded quantifiable data on the performance gaps in the role of the nurse educator as change agent.

Part III of the questionnaire contained six items designed to gain information about such patient teaching factors as self-perceived competence, importance and success in patient teaching. The respondents were asked to circle a number on a five-point scale to indicate their view of their own role in patient teaching. Provision was made at the end of the questionnaire for comments concerning factors important in increasing patient teaching effectiveness.

Research Methodology

A copy of the research proposal and the research instrument that was being developed was submitted to the Vice President (Nursing) on April 30, 1985. Additional copies were forwarded to the Chairman, Nursing Research Review Committee of the hospital. The researcher was invited to meet with the Nursing Research Review Committee on May 14, 1985 to discuss the proposed study and, thereafter, received written approval to conduct the study.

Table 1

Questionnaire Items Relating to the Four Roles of the Patient Educator as Change Agent

Role	Item Number	Teaching Activities
Catalyst	2	I am able to judge the most opportune moment to teach patients and families.
	3	I stimulate the patient's problem-solving ability according to his/her own health and capabilities.
	4	I encourage patients to want to learn.
	7	I encourage patients to ask questions about their care and treatment.
	11	I help patients focus their attention on accomplishing desired goals.
	19	I explain to patients the importance of adhering to the care planned for them.
	21	I encourage patients to seek information in making informed decisions.
	29	I encourage patients to practice, with my assistance, the skills they are learning.
	33	I encourage patients to adopt behaviors which will improve their health.
	39	I provide written instructions for patients to follow to increase their commitment.

Table 1 (continued)

Role	Item Number	Teaching Activities
Process Helper	1	I establish a helping relationship with patients in their learning.
	5	I validate with the patient the learning needs that I have identified.
	9	I assist patients to identify their own learning needs.
	10	I assist patients to formulate long- and short-term goals appropriate to their learning needs.
	16	I consider the patient's readiness to learn the particular knowledge or skill before I begin to teach.
	17	I ask patients what their usual approach is to solving problems.
	18	I actively involve patients in determining acceptable solutions to their health problems.
	25	I relate new learning to the patient's past experiences.
	34	I assist patients in evaluating the progress they are making toward achieving their goals.
	38	I attempt to determine the reason(s) when learning has not occurred.

Table 1 (continued)

Role	Item Number	Teaching Activities
Solution Giver	6	I am able to judge how much information a patient can "handle" or "needs to know."
	8	I give appropriate professional advice to patients and families.
	12	I suggest solutions that have worked for others in similar situations.
	14	I find that my teaching effort consists of giving patients health care information.
	15	I give patients information that is meaningful to them.
	23	I find that patients and families rely on me to provide information to their questions.
	24	I share health care information with patients and families at a level they can understand.
	28	I take the initiative to correct inaccurate information patients may have regarding their treatment and care.
	35	I identify alternative solutions when helping a patient with a health problem.
	37	I am not afraid to admit "I don't know" in answering a question.

Table 1 (continued)

Role	Item Number	Teaching Activities
Resource Linker	13	I suggest a variety of educational resource materials that patients may find useful in meeting their learning needs.
	20	I discuss with patients the resources they have within their family and/or significant others.
	22	I assist patients to identify support systems.
	26	I use various sources to obtain current knowledge to plan and implement my teaching.
	27	I collaborate with other health professionals when developing a comprehensive teaching plan.
	30	I encourage family participation in the teaching plan.
	31	I provide patients with appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.
	32	I help patients make personal application of information when audiovisual or reading materials are used.
	36	I identify appropriate community resources in developing a teaching plan for patients and their families.
	40	I refer to other helping professionals those patients who require assistance with problems that fall within their area of expertise.

To facilitate the study, the Vice President (Nursing) informed Assistant Directors of Nursing and Unit Supervisors in the hospital about the study. The researcher then contacted the unit supervisors of the units selected for the study to explain the nature of the research and to arrange with each supervisor the procedure for introducing the questionnaire to the respective unit. The unit supervisors of each study unit provided a list of all full-time registered nurses functioning as assistant unit supervisors and general staff nurses on the unit. One unit supervisor also provided the name of one patient teacher on the unit. Omitted from the lists were nurses who would be on vacation during the month of June, 1985.

The Assistant Director of Nursing provided the researcher with the names of five full-time patient teachers who worked in several of the study units. Prior to distributing the questionnaires, each patient teacher was contacted by phone to explain that she was selected to participate in the study and to solicit her support in completing the questionnaire. In each instance, they agreed to participate.

Data Collection

On May 31 and June 3, 1985, a total of 175 questionnaires were distributed to full-time registered nurses on selected medical, surgical, obstetrical, and rehabilitation units, and to full-time patient teachers. With the exception of five patient teachers, nurses participating in the study received their questionnaires through personal distribution in cooperation with the unit supervisors of the selected units. The five patient teachers received their questionnaires at their offices. Each nurse received a personally addressed package containing a cover letter (see Appendix A) outlining the general nature of the study and assuring respondents personal anonymity, a questionnaire, and a pre-addressed envelope. Individual nurses returned the completed questionnaires to the researcher at the University of Alberta.

To elicit support for the study, one unit supervisor requested and arranged for the researcher to meet with respondents on the unit following the distribution of the questionnaires.

On June 11, 1985, follow-up letters were delivered to the hospital addressed to each nurse participating in the study. Assistance was sought from the unit supervisors to encourage non-respondents to complete the questionnaire. In a final attempt to increase the response rate, a week before the cut off date for questionaire returns a notice was posted on a bulletin board in each unit participating in the study.

Response Rate of Respondents

Of the 175 questionnaires distributed on May 31 and June 3, 1985, 88 (50.3 percent) were returned by July 19, 1985. All questionnaires were used in the data analysis, however, some questionnaires contained incomplete responses to some questions.

There was a variation in the return rate from nurses in the selected units and patient teachers. A summary of the number of questionnaires distributed and the percentage returns from each of the participating units and patient teachers is presented in Table 2.

A number of factors have been suggested for the relatively low response rate. The unit supervisors from the participating units indicated that "the timing of the study" may have been a factor. The data were collected during the peak vacation period and many nurses were away from work due to illness as well. One surgical unit was closed approximately five weeks after the initial questionnaire was distributed. A unit supervisor indicated that nurses in her area experienced discomfort with patient teaching and were hesitant to respond. In another instance, a unit supervisor indicated that nurses on her unit "mean well" but do not respond to questionnaires, and she suggested that the nurses may have been hesitant to respond as they may have defined patient teaching narrowly as formal teaching which was infrequently done on her unit. In another instance, a unit supervisor mentioned that this was the fourth questionnaire nurses on her unit were asked to complete that month. Two nurses returned their follow-up letters and indicated that they felt uncomfortable completing the questionnaire. When a personal follow-up was conducted, a recent graduate expressed that her discomfort was due to inadequate preparation for this role.

Table 2

Distribution and Return of Questionnaires

Respondents	Questionnaires Number Distributed	 Number Returned	 Percentage Response
Medicine	50	20	40.0
Surgery	53	23	43.3
Obstetrics	44	27	61.4
Rehabilitation	22	13	59.1
Patient teachers	6	5	83.3
TOTAL	175	88	50.3

Treatment of Data

The data from the completed questionnaires were examined for completeness, coded and transferred to tape storage for computer analysis.

Preliminary Analysis

The forty preferred teaching activities used in this study (Part II in the questionnaire) were subjected to a varimax rotated factor analysis to determine the appropriateness of a four factor solution. This analysis was designed to test the construct validity of the following four change agent roles proposed by Havelock (1973): catalyst, process helper, solution giver, and resource linker. The questionnaires in which there were missing values for the preferred frequency of performing the teaching activities were omitted from the factor analysis. A total of 63 questionnaires were useable. The criterion of 0.40 was selected as the minimum acceptable factor loading. (The table in Appendix B presents the factors and the significant loadings for the items.) The factor results of the respondents' ratings in this study were not definitive, and consequently, the data were not analyzed by the four major roles. Twenty-six of the items had factor loadings of 0.40 or greater on one of four factors. Nine items cross-loaded significantly on two factors and three items cross-loaded significantly on three factors. The cross-loadings may be interpreted as lack of clarity of items. Two remaining items failed to load significantly on any of the four factors. Many items did not load as predicted. These results may suggest that the change model may be less relevant to patient education roles than had been anticipated. In particular, the overlap of items suggests that the four change agent roles may not be mutually exclusive.

In this study, all statistical analyses were on an item basis, although the items describing the teaching activities of nurses were grouped according to the major roles of a change agent as established by the panel of experts. The data analyses on an item basis were reported in role categories in this study to facilitate the discussion of the nurse's role as patient educator. In a future use of this instrument, it would be appropriate to develop the construct validity of items more rigorously than was done in this study.

Data Analysis

The following statistical analyses were utilized in this study:

1. Frequency and percentage distributions to describe the personal and professional data and the patient teaching factors.
2. The mean scores for the actual and preferred change agent roles.
3. The t-test procedure to test the statistical significance of differences between two group means.

4. The one-way analysis of variance to test for significant differences among means of three or more groups. The Scheffé test was used to compare individual groups following a significant F ratio in analysis of variance.
5. Content analysis to analyze the open-ended responses.

Summary

The data for this study were collected by a questionnaire designed specifically for this study. The items relating to the roles of catalyst, process helper, solution giver and resource linker were critically reviewed by experts and the revised instrument was pilot tested before it was distributed to 175 full-time registered nurses employed at a major hospital in Alberta.

The forty teaching activity statements were tested for construct validity using factor analysis. Descriptive and analytical statistical procedures were used to address the research questions of the study.

Chapter 4

ANALYSIS OF THE DATA

The purpose of this chapter is to present the results of the data analysis. In the first section, the personal and professional characteristics of the respondents are described, providing a profile of the nurses who participated in the study. Subsequent sections focus on the five specific research questions of the study. This is followed by a content analysis of the open-ended responses.

Personal and Professional Data Profile

The personal and professional variables used to categorize respondents include age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience. Tables 3, 4 and 5 present the frequency and percentage distributions that summarize the responses on these variables. In all data presentations, percentage calculations are based on actual responses.

Age of Respondents

The questionnaire contained seven age groupings that were arbitrarily set: under 25, 25-29, 30-34, 35-39, 40-44, 45-49, 50 and over. Due to the limited numbers within some groupings, the categories were collapsed for the analysis. A distribution of respondents within collapsed categories is presented in Table 3. Of the 88 respondents, 33 (37.9%) were under 30 years of age, 38 (43.7%) were between 30 and 44 years, and 16 (18.4%) were 45 years and over.

Table 3

Distribution of Respondents by Age

(N=88)

Age Categories	Frequency	Percentage
Under 30 years	33	37.9
30 - 44 years	38	43.7
45 years and over	16	18.4

Educational Preparation of Respondents

To determine the nature of the educational preparation of nurses, respondents were asked to provide information relating to all diplomas/degrees held, the year of graduation, and the content areas included in their education. The frequency and percentage distributions that summarize these data are presented in Table 4.

The majority of the respondents (87.5%) reported that they graduated with a diploma in nursing. Of the 77 nurses who graduated with a diploma, eight (9.1%) also indicated they had completed a baccalaureate in nursing degree and two reported completing some courses toward the degree. Eleven respondents (12.5%) indicated that they began their careers with a baccalaureate in nursing degree. Only seven nurses specified other diplomas received, including Nursing Unit Administration Diploma (2), Certificate in Hospital Administration, Midwifery Certificate (2), Post-graduate Operating Room Diploma, and Rehabilitation Services Diploma. The reports of additional courses and diplomas were not examined further for the purposes of description and analysis of the data.

Table 4

Distribution of Respondents by Educational Preparation

(N=88)

Educational Preparation	Frequency	Percentage
Nursing Education		
Diploma in Nursing	69	78.4
Diploma + BN/BScN	8	9.1
BN/BScN	11	12.5
Highest Level of Nursing Education and Year Graduated		
Diploma in Nursing		
1948 - 1965	16	23.5
1966 - 1975	23	33.9
1976 - 1984	29	42.6
BN/BScN		
1958 - 1979	9	47.4
1980 - 1984	10	52.6
Content Areas Included in Education		
Interpersonal communication	79	89.8
Teaching/learning theory	65	73.9
Problem-solving process	70	79.5
Nursing process	75	85.2
Change theory	33	37.5

Of the 69 nurses who received a diploma in nursing as their highest level of education, sixteen (23.5%) graduated between 1948-1965, 23 (33.9%) graduated between 1966-1975, and 29 (42.6%) graduated between 1976-1984.

Of the 19 nurses who held a degree in nursing, ten (52.6%) graduated between 1980-1984, and nine (47.4%) graduated between 1958-1979.

The majority of nurses reported that their education included content in the following areas: interpersonal communication skills (89.8%), teaching/learning theory (73.9%), problem-solving process (79.5%) and nursing process (85.2%). Only 33 nurses (37.5%) reported that change theory was included in their education.

Professional Experience of Respondents

The respondents were requested to indicate the number of years they had worked as a registered nurse, their present position, the length of time employed in this position, their present area of nursing practice, the length of experience in this area, and the total number of years they included patient teaching in their nursing care. The frequency and percentage distributions of the responses are summarized in Table 5.

Over half of the respondents had up to ten years of experience as a registered nurse. Twenty-nine (33.0%) had less than six years of experience, 21 (23.9%) had between 6-10 years, and 38 (43.1%) had over ten years.

The majority of nurses (78.4%) were employed in a general staff nurse position. Fourteen nurses (15.9%) were either unit supervisors or assistant unit supervisors, and for purposes of description and analysis they were classified together as supervisors. Only a small percentage of the nurses (5.7%) were patient teachers.

Approximately half of the nurses reported working less than four years in their present position. Twenty-two (26.5%) worked between 4-6 years, and twenty (24.1%) more than six years. The patient teachers' responses were not included in this description nor in the statistical analysis since the number of respondents were insufficient for a meaningful examination.

Table 5

Distribution of Respondents by Professional Experience

(N=88)

Professional Experience	Frequency	Percentage
As a Registered Nurse		
Less than 6 years	29	33.0
6 - 10 years	21	23.9
Over 10 years	38	43.1
Present Position		
General staff nurse	69	78.4
Supervisor	14	15.9
Patient teacher	5	5.7
Length of Time in Present Position		
Less than 4 years	41	49.4
4 - 6 years	22	26.5
Over 6 years	20	24.1
Present Area of Practice		
Medicine	20	24.1
Surgery	23	27.7
Obstetrics	27	32.5
Rehabilitation	13	15.7
Length of Experience in Present Area		
Less than 6 years	41	50.0
6 - 10 years	17	20.7
Over 10 years	24	29.3
Number of Years of Patient Teaching		
Less than 6 years	32	36.4
6 - 10 years	24	27.3
Over 10 years	32	36.4

The largest number of respondents (32.5%) indicated that their present area of practice was obstetrics. Twenty-three (27.7%) were from surgery (including orthopedics), twenty (24.1%) from medicine, and thirteen (15.7%) from rehabilitation. Four of the five patient teachers indicated that they worked in several practice areas as subject specialists with patients for whom education was a significant treatment modality. The fifth patient teacher was assigned to one specific unit. The patient teachers' responses were not included in this description nor in the statistical analysis.

Half of the nurses reported that they had fewer than six years of experience in their present area of practice. Seventeen (20.7%) had 6-10 years, and 24 (29.3%) had over ten years of experience.

An equal number of nurses (36.4%) indicated that they had included patient teaching in their nursing care fewer than six years or more than ten years. Twenty-four nurses (27.3%) had included patient teaching between 6-10 years. There were small differences between the years of reported experience as a registered nurse and years in which patient teaching was included in nursing care. A closer examination revealed that these differences were reported by both diploma and baccalaureate degree nurses. Except for two recent graduates, the differences were reported by nurses who graduated prior to 1974. For example, two nurses who indicated that they had worked as a registered nurse for 11-15 years, had included patient teaching in their nursing care for only 1-5 years. A third nurse had worked for over twenty years and had included patient teaching for 6-10 years. Three other nurses reported that they had worked for over twenty years and had included patient teaching in their nursing care for 16-20 years.

Differences Between Actual and Preferred Change Agent Roles

The first research question addressed the differences in the perceptions between the actual and preferred change agent roles of registered nurses as catalyst, process helper, solution giver, and resource linker.

A comparison of the responses of nurses to the questions of how frequently they actually performed and should perform the teaching activities that had been assigned to the four roles of catalyst, process helper, solution giver and resource linker is presented in Table 6. The possible frequency response categories were: never = 1, infrequently = 2, some of the time = 3, most of the time = 4, or always = 5. The t-test procedure was used to test statistical differences in the perceptions of nurses. While the findings are discussed within the four major change agent roles, all of the data analyses were performed on an item by item basis.

Catalyst

For items designated as representing functions within the role of catalyst, the mean scores for the actual frequency of performing the teaching activities ranged from 3.23 to 4.58, indicating that the mean frequency responses were greater than "some of the time." The mean scores for the preferred frequency ranged from 4.35 to 4.88, indicating that nurses perceived they should perform the teaching activities more often than "most of the time."

Two teaching activities received either the highest or the lowest rating on both actual and preferred frequencies of performance. Item 7, ***encourage patients to ask questions about their care and treatment***, received the highest rating, with a mean score of 4.58 for the actual performance and a mean of 4.88 for the preferred performance. Item 39, ***provide written instructions for patients to follow to increase their commitment***, received the lowest rating, with a mean score of 3.23 for the actual performance and a mean of 4.35 for the preferred performance. In each instance, the actual practices were perceived to be less frequent than the preferred. The differences between the actual and preferred means were statistically

Table 6

A Comparison of Actual and Preferred Frequencies of Teaching Activities

(N=88)

	Teaching Activities		Mean	t
Catalyst				
*2	Am able to judge the most opportune moment to teach.	A[1]	3.83	- 9.83***
		S	4.54	
*3	Stimulate patient's problem-solving ability.	A	3.80	-11.10***
		S	4.66	
4	Encourage patients to want to learn.	A	3.94	- 7.98***
		S	4.69	
7	Encourage questions.	A	4.58	- 4.92***
		S	4.88	
11	Help patients focus attention on accomplishing desired goals.	A	3.56	-11.13***
		S	4.55	
19	Explain importance of adhering to the care planned.	A	4.07	- 7.25***
		S	4.61	
*21	Encourage patients to make informed decisions.	A	4.04	- 7.88***
		S	4.70	
29	Encourage patients to practice skills.	A	4.20	- 6.94***
		S	4.72	
33	Encourage adopting behaviors that will improve health.	A	3.94	- 8.33***
		S	4.68	
39	Provide written instructions to increase commitment.	A	3.23	-10.63***
		S	4.35	

Table 6 (continued)

	Teaching Activities		Mean	t
Process Helper				
1	Establish a helping relationship.	A	4.12	- 9.04***
		S	4.74	
*5	Validate learning needs with the patient.	A	3.80	- 9.80***
		S	4.67	
*9	Assist patients to identify learning needs.	A	3.43	-12.35***
		S	4.45	
*10	Assist patients to formulate long- and short-term goals.	A	3.17	-14.56***
		S	4.48	
16	Consider the patient's readiness to learn before teaching.	A	4.01	-10.51***
		S	4.78	
*17	Ask patients their usual approach to solving problems.	A	2.78	-14.87***
		S	4.22	
18	Actively involve patients in determining acceptable solutions.	A	3.63	-10.61***
		S	4.57	
25	Relate new learning to patient's past experiences.	A	3.75	- 8.02***
		S	4.38	
*34	Assist patients in evaluating their progress.	A	3.54	-12.11***
		S	4.60	
*38	Attempt to determine the reason(s) when learning has not occurred.	A	4.00	- 9.53***
		S	4.73	

Table 6 (continued)

	Teaching Activities		Mean	t
Solution Giver				
6	Am able to judge how much information a patient can "handle" or "needs to know."	A S	3.98 4.57	- 7.02***
8	Give appropriate professional advice.	A S	4.18 4.76	- 9.48***
12	Suggest solutions that have worked for others.	A S	3.96 4.36	- 5.64***
14	Give patients health care information.	A S	3.88 4.34	- 5.32***
15	Give meaningful information.	A S	4.20 4.80	- 8.60***
23	Patients and families rely on my information.	A S	3.99 4.26	- 3.24 **
24	Share health care information at a level patients can understand.	A S	4.36 4.78	- 6.66***
28	Take initiative to correct inaccurate information.	A S	4.36 4.80	- 7.30***
*35	Identify alternative solutions.	A S	3.84 4.65	-10.58***
37	Am not afraid to admit "I don't know."	A S	4.65 4.86	- 4.31***

Table 6 (continued)

	Teaching Activities		Mean	t
Resource Linker				
*13	Suggest a variety of educational resource materials.	A	3.28	-10.99***
		S	4.40	
20	Discuss resources within family and/or significant others.	A	3.70	- 8.27***
		S	4.50	
22	Assist patients to identify support systems.	A	3.66	- 9.46***
		S	4.62	
26	Use various sources to obtain current knowledge.	A	3.75	- 9.43***
		S	4.70	
27	Collaborate with other health professionals.	A	3.90	- 8.30***
		S	4.64	
30	Encourage family participation.	A	3.86	- 7.86***
		S	4.60	
31	Provide appropriate resources.	A	3.27	-10.01***
		S	4.36	
32	Help patients make personal application of information.	A	3.09	-10.10***
		S	4.26	
*36	Identify appropriate community resources.	A	3.46	-10.05***
		S	4.58	
40	Refer patients to other helping professionals.	A	4.45	- 6.10***
		S	4.85	

***$p \leq 0.001$; **$p \leq 0.01$; *Item loaded on more than one factor.

[1] A represents actual performance; S represents preferred performance

significant beyond the 0.001 level of significance for all ten items.

Process Helper

For items designated as representing functions within the role of process helper, the mean scores for the actual frequency ranged from 2.78 to 4.12, with only one teaching activity receiving a mean frequency response of less than "some of the time." The mean scores for the preferred frequency ranged from 4.22 to 4.78, indicating that nurses perceived they should perform the teaching activities more often than "most of the time."

The teaching activity perceived to be most frequently performed was item 1, *establishing a helping relationship with patients in their learning*, with a mean of 4.12. The teaching activity nurses perceived should be performed most frequently was item 16, *consider the patient's readiness to learn before teaching*, with a mean of 4.78. Item 17, *ask patients their usual approach to solving problems*, received the lowest rating for both actual and preferred frequencies, with mean scores of 2.78 and 4.22, respectively. Item 10, *assist patients to formulate long- and short-term goals*, received the second lowest rating for the actual frequency, with a mean of 3.17.

There were significant differences in the responses of nurses on the actual and preferred frequencies of performing the teaching activities. In each instance, actual practices were less frequent than preferred. The differences between the means were statistically significant beyond the 0.001 level of significance.

Solution Giver

For items designated as representing functions within the role of solution giver, the mean scores for the actual frequency ranged from 3.84 to 4.65, with one-half of the teaching activities receiving a mean frequency response greater than "most of the time." The mean scores for the preferred frequency ranged from 4.26 to 4.86, once again indicating that nurses perceived they should perform the teaching activities more often than "most of the time."

The teaching activity that was performed most frequently and that also was perceived should be performed most frequently was item 37, *I am not afraid to admit "I don't know,"* in answering a question. Item 35, *identify alternative solutions*, received the lowest rating for the actual frequency, with a mean of 3.84. Item 23, *patients and families rely on me to provide information to their questions*, received the lowest rating for the preferred frequency, with a mean of 4.26.

For all ten teaching activities, the actual frequency of performance was not what nurses perceived it should be. The differences between the actual and preferred means were statistically significant beyond the 0.001 level of significance for all items except item 23, where the difference was significant beyond the 0.01 level.

Resource Linker

For items designated as representing functions within the role of resource linker, the mean scores for the actual frequency ranged from 3.09 to 4.45 with only one teaching activity receiving a mean frequency response greater than "most of the time." The mean scores for the preferred frequency were high, ranging from 4.26 to 4.85.

Two teaching activities received either the highest or the lowest rating on both the actual and preferred frequencies of performance. Item 40, *refer patients to other helping professionals*, received the highest rating, with a mean score of 4.45 for the actual performance, and a mean of 4.85 for the preferred performance. Item 32, *help patients make personal application of information when audiovisual or reading materials are used*, received the lowest rating, with a mean score of 3.09 for the actual performance and a mean of 4.26 for the preferred performance.

For all teaching activities, the actual practices were perceived to be less frequent than the preferred. The differences between the means were statistically significant beyond the 0.001 level of significance.

Summary

There were significant differences in the responses of nurses on the actual and preferred frequencies of performing the teaching activities assigned to the four roles of catalyst, process helper, solution giver, and resource linker. Only one item, *I ask patients their usual approach to solving problems*, was reported to actually be performed less often than "some of the time." Nurses perceived that all of the teaching activities should be performed more often than "most of the time." The actual practices for all teaching activities were perceived to be less frequent than preferred. The differences between the actual and preferred means were statistically significant beyond the 0.001 level of significance for all teaching activities except one which was significant beyond the 0.01 level.

Differences Related to Personal and Professional Characteristics

To what extent are the perceptions of the change agent roles related to such personal and professional characteristics of nurses as age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience?

The responses of nurses to actual (A) and preferred (S) frequencies of performing the teaching activities assigned to the four roles of catalyst, process helper, solution giver and resource linker were examined by selected personal and professional characteristics. The data were analyzed by using the t-test procedure to determine the statistical significance of differences between the means of two groups, and by the one-way analysis of variance to determine significant differences between the means of more than two groups. Following a significant F ratio in analysis of variance, the Scheffé method of multiple comparison was used to identify the groups between which differences existed. The items which showed statistically significant mean differences on the personal and professional characteristics are identified and discussed within the four roles of a change agent.

Age

Due to the limited number of respondents within some age groupings, the following three age categories were used for data analysis: under 30 years, 30 - 44 years, and 45 years and over. The items which showed statistically significant mean differences on actual and preferred frequencies of teaching activities according to age are presented in Table 7.

Catalyst. For items allocated to the role of catalyst, analysis of variance of the mean responses of nurses in three different age categories revealed no significant differences on the actual frequency of performing the teaching activities. Statistically significant differences were found, however, in the perceptions of nurses on the preferred frequency of performing the teaching activities. The Scheffé test ($p \leq 0.10$) showed that the means for nurses under 30 years of age and those between 30 - 44 years were significantly higher than the mean for nurses 45 years and older on the following five items describing teaching activities:

2. I am able to judge the most opportune moment to teach patients and families.
3. I stimulate the patient's problem-solving ability according to his/her own health and capabilities.
4. I encourage patients to want to learn.
21. I encourage patients to seek information in making informed decisions.
29. I encourage patients to practice, with my assistance, the skills they are learning.

In addition, the mean for nurses under 30 years of age (4.76) was significantly higher than the mean for nurses 45 years and older (4.07) for item 11, *I help patients focus their attention on accomplishing desired goals.*

Process helper. For items allocated to the role of process helper, the analysis of variance of the mean responses of nurses in three different age categories revealed statistically significant differences on both the actual and preferred frequencies of performing one teaching activity, *I establish a helping relationship with patients in their learning.* The Scheffé test showed that for both the actual and preferred frequencies of performance, the means for nurses 30 - 44 years of age were significantly higher than the means for nurses 45 years and older. In addition, the perceptions of nurses on the preferred frequency of establishing a

Table 7

Differences on Actual and Preferred Frequencies of Teaching Activities by Age

	Teaching Activities		1. Under 30 yrs. $\bar{X}$ (N=33)	2. 30-44 yrs. $\bar{X}$ (N=38)	3. Over 44 yrs. $\bar{X}$ (N=16)	F	Significantly Different Groups
Catalyst							
2	Am able to judge the most opportune moment to teach.	A[1] S	4.64	4.66	4.00	4.74*	1>3, 2>3
3	Stimulate patient's problem-solving ability.	S	4.81	4.71	4.20	5.22**	1>3, 2>3
4	Encourage patients to want to learn.	S	4.85	4.69	4.29	4.99**	1>3, 2>3
11	Help patients focus attention on accomplishing desired goals.	S	4.76	4.57	4.07	4.34*	1>3

Table 7 (continued)

	Teaching Activities		1. Under 30 yrs. $\bar{X}$ (N=33)	2. 30-44 yrs. $\bar{X}$ (N=38)	3. Over 44 yrs. $\bar{X}$ (N=16)	F	Significantly Different Groups
Catalyst (continued)							
21	Encourage patients to make informed decisions.	S	4.85	4.71	4.29	5.05^{**}	1>3, 2>3
29	Encourage patients to practice skills.	S	4.84	4.76	4.29	4.52^{*}	1>3, 2>3
Process Helper							
1	Establish a helping relationship.	A S	4.00 4.88	4.37 4.78	3.88 4.33	3.53^{*} 6.73^{**}	2>3 1>3, 2>3

Table 7 (continued)

Teaching Activities			1. Under 30 yrs. $\bar{X}$ (N=33)	2. 30-44 yrs. $\bar{X}$ (N=38)	3. Over 44 yrs. $\bar{X}$ (N=16)	F	Significantly Different Groups
	Solution Giver						
8	Give appropriate professional advice.	S	4.85	4.80	4.47	4.12*	1>3, 2>3
15	Give meaningful information.	S	4.91	4.77	4.57	3.17*	1>3
23	Patients and families rely on my information.	A	4.12	4.00	3.31	7.58***	1>3, 2>3
24	Share health care information at a level patients can understand.	S	4.85	4.85	4.43	3.28*	1>3, 2>3
37	Am not afraid to admit "I don't know."	S	4.91	4.94	4.62	4.15*	1>3, 2>3

Table 7 (continued)

	Teaching Activities		1. Under 30 yrs. $\bar{X}$ (N=33)	2. 30-44 yrs. $\bar{X}$ (N=38)	3. Over 44 yrs. $\bar{X}$ (N=16)	F	Significantly Different Groups
	Resource Linker						
22	Assist patients to identify support systems.	S	4.70	4.71	4.21	3.12*	1>3, 2>3
26	Use various sources to obtain current knowledge.	A	3.36	4.00	4.00	5.37**	2>1, 3>1
31	Provide appropriate resources.	A	2.76	3.78	3.27	8.72***	2>1
32	Help patients make personal application of information.	A	2.75	3.43	3.13	3.69*	2>1

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$; [1]A represents actual performance; S represents preferred performance helping relationship showed that the mean for nurses under 30 years (4.88) was also significantly higher than the mean for nurses 45 years and older (4.33). For the other items within this role, age was not significantly related to the perceptions of the nurses.

Solution giver. The results of the analysis of variance for items allocated to the role of solution giver revealed that a statistically significant mean difference existed among age groupings on the actual frequency of performing only one teaching activity, item 23, *I find that patients and families rely on me to provide information to their questions.* The Scheffé test showed that the means for nurses under 30 years of age (4.12) as well as for nurses between 30 - 44 years (4.00) were significantly higher than the mean for nurses over 44 years of age (3.31).

There were statistically significant mean differences among age groupings in the nurses' perceptions of the preferred frequency of performing the teaching activities described on four items. The means for nurses under 30 years of age and those between 30 - 44 years were significantly higher than the mean for nurses over 44 years for each of the following items:

8. I give appropriate professional advice to patients and families.
24. I share health care information with patients and families at a level they can understand.
37. I am not afraid to admit "I don't know" in answering a question.

In addition, the mean for nurses under 30 years of age (4.91) was significantly higher than the mean for nurses over 44 years (4.57) for item 15, *I give patients information that is meaningful to them.*

Resource linker. For items allocated to the role of resource linker, analysis of variance of the mean responses of nurses in the three different age categories revealed significant differences in the actual frequency of performing the teaching activities described in three items:

26. I use various sources to obtain current knowledge to plan and implement my teaching.
31. I provide patients with appropriate resources to enhance learning.

32. I help patients make personal application of information when audiovisual or reading materials are used.

For all three items, the Scheffé test showed that the means for nurses between 30 - 44 years were significantly higher than the means for nurses under 30 years of age. In addition, for item 26, the mean for nurses over 44 years (4.00) was also significantly higher than the mean for nurses under 30 years of age (3.36).

There was also a statistically significant mean difference in the perceptions of nurses on the preferred frequency of performing item 22, *I assist patients to identify support systems*. The Scheffé test showed that the means for nurses under 30 years of age (4.70) and for nurses between 30 - 44 years (4.71) were significantly higher than the mean for nurses over 44 years (4.21). Age was not found to be statistically significant for the other items.

Summary. The results of the one-way analysis of variance revealed five statistically significant differences on the actual performance and twelve significant differences on the preferred performance of the teaching activities according to age. It was noted that on the actual frequency of performing the teaching activities, the mean responses of nurses 30 - 44 years of age consistently differed from nurses either under 30 years or over 44 years. However, on the preferred performance, nurses under 30 years of age and those between 30 - 44 years (except in two instances) perceived that they should perform the twelve teaching activities more frequently than did nurses 45 years and older.

Nursing Education

Respondents indicated all diplomas and degrees that they received. The data were analyzed by using the appropriate t-test procedure for unequal or small sample sizes (SPSS X: Statistical Package for the Social Sciences, 1983) to determine: (1) the differences between the means of nurses who received a baccalaureate degree or a diploma in nursing as their highest level of nursing education, and (2) the differences between the means of nurses who received a baccalaureate degree in addition to a diploma in nursing or a baccalaureate degree in nursing only.

Degree or diploma as the highest level of nursing education. For items assigned to the roles of catalyst, process helper, and resource linker, no statistically significant mean differences were found between the responses of nurses on the actual and preferred frequencies of performing the teaching activities and their highest diploma/degree received. For the preassigned role of solution giver, only one item indicated a statistically significant mean difference as shown in Table 8. The item, *I am not afraid to admit "I don't know" in answering a question*, indicated a statistical difference on the actual frequency of performing the teaching activity. The mean response of nurses with a diploma in nursing as their highest level of nursing education was 4.72, and the mean response of nurses with a baccalaureate degree was 4.39, indicating that diploma nurses perceived they were not as afraid to admit that they did not know the answer to a question significantly more often than were degree nurses.

Table 8

Differences on Actual and Preferred Frequencies of Teaching Activities by Highest Level of Nursing Education

Teaching Activity		**BN/BScN** $\bar{X}$ **(N=19)**	**Diploma** $\bar{X}$ **(N=69)**	**t**
Solution Giver				
37 Am not afraid to admit "I don't know."	A[1]	4.39	4.72	-2.21*

*$p \leq 0.05$; [1]A represents actual performance

Basic or post-basic baccalaureate nursing education. The results of the data analysis for items assigned to the role of catalyst revealed one statistically significant mean difference between the responses of basic and post-basic baccalaureate degree nurses on both the actual and preferred frequencies of performing the teaching activity (Table 9). The item, *I am able to judge the most opportune moment to teach patients and families*, indicated a significant difference beyond the 0.05 level of significance on both the actual and the preferred performance. The mean responses of nurses who received a basic degree were significantly higher than the responses of nurses who received a post-basic degree.

Table 9

Differences on Actual and Preferred Frequencies of Teaching Activities by Baccalaureate Nursing Education

	Teaching Activities		Basic $\bar{X}$ (N=11)	Post-Basic $\bar{X}$ (N=8)	t
Catalyst					
2	Am able to judge the most opportune moment to teach.	A[1] S	4.18 4.64	3.50 4.00	2.19* 2.47*
Resource Linker					
30	Encourage family participation.	A	3.36	4.29	-2.70*

*$p \leq 0.05$; [1]A represents actual performance; S represents preferred performance

For items assigned to the roles of process helper and solution giver, there were no statistically significant mean differences in the perceptions of basic and post-basic baccalaureate degree nurses. The findings, therefore, suggest high homogeneity between baccalaureate nurses' perceptions of the actual and preferred frequencies of performing these teaching activities.

For the preassigned role of resource linker, the differences on the actual frequency of teaching activities reached statistical significance on only one item, *I encourage family participation in the teaching plan*. The mean response of nurses who received a basic nursing degree was 3.36, and the mean response of nurses who received a post-basic nursing degree was 4.29. The mean responses indicated that post-basic degree nurses perceived that they encouraged family participation in the teaching plan significantly more often than did basic degree nurses.

Summary. In general, the two variables, baccalaureate degree or diploma as the highest level of nursing education, and post-basic or basic baccalaureate nursing education, were not highly influential in the nurses' perceptions of their actual or preferred frequency of performing the teaching activities.

Year Completed Highest Level of Nursing Education

The respondents indicated the year they graduated with a Diploma in Nursing and/or a Bachelor in Nursing Degree. Their responses were analyzed by the year they received their highest level of nursing education.

Diploma in nursing. Sixty-nine respondents graduated with a diploma in nursing as their highest level of nursing education. For the purposes of data analysis, the years that the nurses graduated were grouped into three categories: between 1948-65, between 1966-75, and between 1976-84. The items which showed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities according to the year the nurses received their diploma in nursing are presented in Table 10.

Table 10

Differences on Actual and Preferred Frequencies of Teaching Activities by Year Diploma Received

	Teaching Activities		1. 1948-65 $\bar{X}$ (N=16)	2. 1966-75 $\bar{X}$ (N=23)	3. 1976-84 $\bar{X}$ (N=29)	F	Significantly Different Groups
	Catalyst						
19	Explain importance of adhering to the care planned.	A[1]	3.94	4.39	3.86	3.35*	2>3
21	Encourage patients to make informed decisions.	S	4.36	4.67	4.86	3.46*	3>1
	Process Helper						
5	Validate learning needs with the patient.	A	3.69	4.23	3.59	3.81*	2>3

Table 10 (continued)

Teaching Activities		1. 1948-65 $\bar{X}$ (N=16)	2. 1966-75 $\bar{X}$ (N=23)	3. 1976-84 $\bar{X}$ (N=29)	F	Significantly Different Groups
Process Helper (continued)						
17 Ask patients their usual approach to solving problems.	A	2.75	3.30	2.45	4.21*	2>3
18 Actively involve patients in determining acceptable solutions.	A	3.33	4.13	3.41	7.29**	2>1, 2>3
Solution Giver						
14 Give patients health care information.	A	3.69	4.30	3.55	6.07**	2>1, 2>3
15 Give meaningful information.	A	4.25	4.61	4.00	6.32**	2>3

Table 10 (continued)

Teaching Activities		1. 1948-65 $\bar{X}$ (N=16)	2. 1966-75 $\bar{X}$ (N=23)	3. 1976-84 $\bar{X}$ (N=29)	F	Significantly Different Groups
Solution Giver (continued)						
35 Identify alternative solutions.	A	3.87	4.23	3.57	4.27*	2>3
Resource Linker						
22 Assist patients to identify support systems.	A	4.00	4.00	3.28	4.44*	1>3, 2>3
26 Use various sources to obtain current knowledge.	A	4.00	4.22	3.45	5.39**	2>3
27 Collaborate with other health professionals.	A	4.33	4.35	3.45	8.46***	1>3, 2>3

Table 10 (continued)

Teaching Activities		1. 1948-65 $\bar{X}$ (N=16)	2. 1966-75 $\bar{X}$ (N=23)	3. 1976-84 $\bar{X}$ (N=29)	F	Significantly Different Groups
Resource Linker (continued)						
31 Provide appropriate resources.	A	3.53	3.59	2.69	5.88**	1>3, 2>3
32 Help patients make personal application of information.	A	3.44	3.35	2.55	6.26**	1>3, 2>3
40 Refer patients to other helping professionals.	A	4.69	4.59	4.18	5.13**	1>3, 2>3

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

For items allocated to the role of catalyst, the analysis of variance of the mean responses of nurses in the three categories revealed one significant difference on the actual frequency and one significant difference on the preferred frequency of performing the teaching activities. For the actual performance of the teaching activity described in item 19, *I explain to patients the importance of adhering to the care planned for them*, the mean of 4.39 for nurses graduating between 1966-75 was significantly higher than the mean of 3.86 for nurses graduating between 1976-84. The perceptions of nurses on the preferred frequency of performing the teaching activity described in item 21, *I encourage patients to seek information in making informed decisions*, indicated that the mean of 4.86 for nurses graduating between 1976-84 was significantly higher than the mean of 4.36 for nurses graduating between 1948-65.

For items allocated to the role of process helper, the analysis of variance of the mean responses of nurses in the three categories revealed that statistically significant mean differences existed on the actual but not on the preferred frequency of performing the teaching activities. The mean for nurses graduating between 1966-75 was significantly higher than the mean for nurses graduating between 1976-84 for the following items:

5. I validate with the patient the learning needs that I have identified.
17. I ask patients what their usual approach is to solving problems.

For item 18, *I actively involve patients in determining acceptable solutions to their health problems*, the mean response of 4.13 for nurses graduating between 1966-75 was significantly higher than the mean of 3.33 for nurses graduating between 1948-65 as well as the mean of 3.41 for nurses graduating between 1976-84.

For items allocated to the role of solution giver, the analysis of variance of the mean responses of nurses revealed statistically significant differences only on the actual frequency of performing the teaching activities. The mean responses for nurses graduating between 1966-75 were significantly higher than the mean responses for nurses graduating between 1976-84 for the following items:

14. I find that my teaching effort consists of giving patients health care information.

15. I give patients information that is meaningful to them.

35. I identify alternative solutions when helping a patient with a health problem.

In addition, for item 14, the mean response for nurses graduating between 1948-65 was significantly lower than for those who graduated between 1966-75.

For items allocated to the role of resource linker, the analysis of variance of the mean responses of nurses revealed six statistically significant differences on the actual frequency of performing the teaching activities. Results of the Scheffé test indicated that for item 26, *I use various sources to obtain current knowledge to plan and implement my teaching*, the mean response of 4.22 for nurses graduating between 1966-75 was significantly higher than the mean of 3.45 for nurses graduating between 1976-84. The mean responses for nurses who graduated between 1948-65 and between 1966-75 were significantly higher than the mean responses for nurses who graduated between 1976-84 for the following items:

22. I assist patients to identify support systems.

27. I collaborate with other health professionals when developing a comprehensive teaching plan.

31. I provide patients with appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.

32. I help patients make personal application of information when audiovisual or reading materials are used.

40. I refer to other helping professionals those patients who require assistance with problems that fall within their area of expertise.

For items 31 and 32, the nurses who graduated between 1948-65 and between 1966-75 perceived that they performed the teaching activities less frequently than most of the time, while nurses who graduated between 1976-84 perceived that they performed the teaching activities less frequently than some of the time.

There were no statistically significant mean differences found in the perceptions of nurses on the preferred frequency of performing the teaching activities described in the items for this role.

Summary. The results of the one-way analysis of variance revealed that thirteen items indicated statistically significant mean differences between the actual frequency of performing the teaching activities and the year the nurses graduated with a diploma in nursing as their highest level of education. For each of these items, the nurses who graduated between 1966-75 perceived that they performed the teaching activities more frequently than the nurses who graduated between 1976-84. For two items, one within the preassigned role of process helper and one within the preassigned role of solution giver, the nurses who graduated between 1966-75 perceived that they performed the teaching activities more frequently than nurses who graduated between 1948-65 and those between 1976-84. For five items within the preassigned role of resource linker, the nurses who graduated between 1948-75 perceived that they performed the teaching activities more frequently than did nurses who graduated more recently. It would appear that the number of years since graduation with a diploma in nursing influenced the nurses actual performance on items identified as functions of a resource linker.

The year the nurses graduated did not appear to influence their perceptions of how frequently they should perform the teaching activities.

Baccalaureate degree. Nineteen respondents graduated with a baccalaureate degree as their highest level of nursing education. For the purposes of data analysis, the years that the nurses graduated were grouped into two categories: between 1958-79 and between 1980-84.

The results of the data analysis for items assigned to the roles of catalyst, process helper and solution giver, revealed no statistically significant mean differences between the responses of baccalaureate degree nurses on the actual and preferred frequencies of performing the teaching activities and the year the nurses graduated. Perhaps a larger sample would have permitted a closer examination of this issue by creating smaller response categories for the year of graduation.

For the preassigned role of resource linker, only one item indicated a statistically significant mean difference as shown in Table 11. The item, ***I help patients make personal application of information when audiovisual or reading materials are used***, indicated a statistical difference beyond the 0.05 level of significance on the preferred frequency of performing the teaching activity. The mean response of nurses who graduated between 1958-79 was 3.88, and the mean response of nurses who graduated between 1980-84 was 4.75, indicating that the nurses who graduated between 1980-84 perceived that they should help patients make personal application of information significantly more often than did nurses who graduated between 1958-79.

Table 11

Differences on Actual and Preferred Frequencies of Teaching Activities by Year Baccalaureate Degree Received

Teaching Activity		1958-79 $\bar{X}$ (N=9)	1980-84 $\bar{X}$ (N=10)	t
Resource Linker				
32 Help patients make personal application of information.	S[1]	3.88	4.75	-2.26*

*$p \leq 0.05$; [1]S represents preferred performance

Content Areas Included in Educational Programs

Five content areas were analyzed: interpersonal communication skills, teaching/learning theory, problem-solving process, nursing process, and change theory. The items which showed statistically significant mean differences on the actual and preferred frequencies of teaching activities according to each of the five content areas are presented in Table 12.

Interpersonal communication skills. The results of the data analysis for the preassigned role of catalyst revealed a statistically significant mean difference on the actual frequency of performing the teaching activities between the responses of nurses who had interpersonal communication skills in their education and those who did not on only one item, *I provide written instructions for patients to follow to increase their commitment*. The mean response of the 79 nurses who indicated that they had interpersonal communication skills included in their education was 3.18, significantly lower than the mean response of 4.13 for the nine nurses who did not indicate the content was included in their education.

For items allocated to the roles of process helper, solution giver and resource linker, there were no statistically significant mean differences in the perceptions of nurses on the actual and preferred frequencies of performing the teaching activities according to this content area.

Teaching/learning theory. The results of the data analysis revealed two statistically significant differences on the actual frequency of performing the teaching activities between the mean responses of nurses who had teaching/learning theory in their education and those who did not. One item was within the preassigned role of catalyst (I help patients focus their attention on accomplishing desired goals) and the other within the preassigned role of resource linker (I assist patients to identify support systems). For both items, the mean responses of the 65 nurses who indicated they had teaching/learning theory included in their education were significantly higher than the mean responses of 23 nurses who did not indicate the content was included.

Table 12

Differences on Actual and Preferred Frequencies of Teaching Activities by Content Areas in Educational Programs

Role	Item Number	Teaching Activities		Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Interpersonal Communication Skills				(N=79)	(N=9)	
Catalyst	39	Provide written instructions.	A^1	3.18	4.13	-2.33*
Teaching/Learning Theory				(N=65)	(N=23)	
Catalyst	11	Help patients focus attention on accomplishing desired goals.	A	3.70	3.22	2.02*
Resource Linker	22	Assist patients to identify support systems.	A	3.84	3.26	2.52*

Table 12 (continued)

Role	Item Number	Teaching Activities		Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Problem-Solving Process				(N=70)	(N=18)	
Catalyst	2	Am able to judge the most opportune moment to teach.	S	4.45	4.88	-3.38***
	39	Provide written instructions.	A S	3.13 4.28	3.78 4.67	-2.22* -2.41*
Resource Linker	20	Discuss resources within family and/or significant others.	S	4.43	4.80	-2.36*
Nursing Process				(N=75)	(N=13)	
Catalyst	2	Am able to judge the most opportune moment to teach.	S	4.46	5.00	-2.32*
	3	Stimulate patient's problem-solving ability.	S	4.63	4.91	-2.34*

Table 12 (continued)

Role	Item Number	Teaching Activities		Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Nursing Process (continued)				(N=75)	(N=13)	
Catalyst	4	Encourage patients to want to learn.	S	4.65	4.91	-2.21*
	7	Encourage questions.	A	4.53	4.85	-2.44*
	11	Help patients focus attention on accomplishing desired goals.	S	4.49	4.91	-3.15**
Process Helper	9	Assist patients to identify learning needs.	A S	3.38 4.40	4.00 4.82	-2.29* -2.79*
	10	Assist patients to formulate long- and short-term goals.	S	4.40	4.82	-2.59*
	25	Relate new learning to patient's past experiences.	S	4.33	4.78	-2.41*

Table 12 (continued)

Role	Item Number	Teaching Activities		Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Nursing Process (continued)				(N=75)	(N=13)	
Resource Linker	20	Discuss resources within family and/or significant others.	S	4.44	4.90	-3.12**
Change Theory				(N=33)	(N=55)	
Catalyst	2	Am able to judge the most opportune moment to teach.	A	4.03	3.69	2.19*
	21	Encourage patients to make informed decisions.	A	4.34	3.89	2.33*
	33	Encourage adopting behaviors that will improve health.	A	4.22	3.74	2.38*

Table 12 (continued)

Role	Item Number	Teaching Activities		Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Change Theory (continued)				(N=33)	(N=55)	
Solution Giver	24	Share health care information at a level patients can understand.	A	4.56	4.22	2.12*
Resource Linker	30	Encourage family participation.	S	4.78	4.49	2.00*
	31	Provide appropriate resources.	A	3.59	3.08	2.14*

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

There were no statistically significant mean differences found in the perceptions of nurses on the preferred frequency of performing the teaching activities. The findings suggest that the nurses' perceptions of how frequently they should perform the teaching activities described in the items were similar whether or not teaching/learning theory was included in their education.

Problem-solving process. The results of the data analysis for items assigned to the role of catalyst, revealed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities between the responses of nurses who reported that the problem-solving process was included in their education and those who did not. Item 39, ***I provide written instructions for patients to follow to increase their commitment***, indicated a statistical difference on both the actual and the preferred performance, while item 2, ***I am able to judge the most opportune moment to teach patients and families***, indicated a statistical difference on only the preferred performance. In each instance, the mean responses of nurses who indicated that their education did not include the problem-solving process were significantly higher than the mean responses of nurses who indicated that the content was included.

For items allocated to the roles of process helper and solution giver, there were no statistically significant mean differences found in the perceptions of nurses on the actual or the preferred frequency of performing the teaching activities. This suggests that the problem-solving process in education did not appear to influence the nurses actual or preferred performance in these roles.

For items allocated to the role of resource linker, there were no significant differences found on the actual performance of the teaching activities, however, in the perceptions of nurses on the preferred frequency of performing the teaching activities, there was a statistically significant difference on the item, ***I discuss with patients the resources they have within their family and/or significant others***. Interestingly, the nurses who indicated that their education did not include the problem-solving process perceived that they should discuss resources with the patient significantly more often than did nurses who indicated the content was included.

Nursing process. For the preassigned role of catalyst, a statistically significant mean difference was found in the perceptions of nurses who had nursing process in their education and those who did not on the actual frequency of performing the teaching activity, *I encourage patients to ask questions about their care and treatment.* Four statistically significant differences were found on the preferred frequency of performing the following teaching activities:

2. I am able to judge the most opportune moment to teach patients and families.
3. I stimulate the patient's problem-solving ability according to his/her own health and capabilities.
4. I encourage patients to want to learn.
11. I help patients focus their attention on accomplishing desired goals.

On all five differences, the mean responses of thirteen nurses who did not indicate that their education included the nursing process were significantly higher than the mean responses of 75 nurses who indicated that the content was included.

Similarly, four statistically significant mean differences were found in the responses of nurses on the actual and preferred frequencies of performing the teaching activities for the preassigned role of process helper; those who did not report the nursing process in their education scored higher than those who indicated it was included. Item 9, *I assist patients to identify their own learning needs*, indicated a significant difference on both the actual and the preferred performance. Item 10, *I assist patients to formulate long- and short-term goals appropriate to their learning needs*, and item 25, *I relate new learning to the patient's past experiences*, showed significant differences only on the preferred performance.

There were no statistically significant mean differences in the perceptions of nurses for the preassigned role of solution giver when considered on the basis of whether or not the nursing process was included in their education.

For items assigned to the role of resource linker, one statistically significant difference was found in the perceptions of nurses on the preferred frequency of performing the teaching activities. As in all other differences for the nursing process, those nurses whose education did not include the nursing process perceived that they should discuss with patients the resources within their family and/or significant others significantly more often than did the nurses whose education included this content.

Change theory. The results of the data analysis revealed that, for items assigned to the roles of catalyst and solution giver, statistically significant mean differences were found only on the actual frequency of performing the teaching activities. The mean scores of 33 nurses who indicated that change theory was included in their education were significantly higher than the mean scores of 55 nurses whose education did not include it, for the following three items within the role of catalyst:

2. I am able to judge the most opportune moment to teach patients and families.
21. I encourage patients to seek information in making informed decisions.
33. I encourage patients to adopt behaviors which will improve their health.

and the following item within the role of solution giver:

24. I share health care information with patients and families at a level they can understand.

This finding suggests that including change theory in the nurses education had a positive effect on the actual frequency of performing these teaching activities.

There were no statistically significant mean differences in the perceptions of nurses on the actual or the preferred frequency of performing the teaching activities for the preassigned role of process helper when considered on the basis of whether or not change theory was included in their education.

Only two statistically significant mean differences were found in the perceptions of the teaching activities for the preassigned role of resource linker. On the actual performance, nurses who had change theory in their education perceived that they provided patients with appropriate resources to enhance learning more frequently than did nurses who had not taken this content. Similarly, on the preferred performance, nurses who had change theory included in their education perceived that they should encourage family participation in their teaching plan more frequently than did nurses who did not have this content included.

Summary. For the three content areas, interpersonal communication skills, problem-solving process and nursing process, the differences found on four actual and eleven preferred performance dimensions revealed that nurses who had had the content included in their education consistently perceived that they performed the teaching activities less frequently than nurses who had not had the content included. In contrast, the differences on seven actual and one preferred performance dimension for the two content areas, teaching/learning theory and change theory, revealed that nurses who had taken the content in their education perceived their actual and preferred performance of the teaching activities to be consistently more frequent than those who had not had this content included.

Years of Experience as a Registered Nurse

For the purposes of data analysis, the number of years that the nurses worked as a registered nurse were grouped into three categories: less than six years, 6-10 years, and over ten years. The items on which statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities were found by the years of experience as a registered nurse are presented in Table 13.

Catalyst. The results of the analysis of variance for items representing the role of catalyst revealed no statistically significant mean differences on the actual frequency of performing the teaching activities. There was, however, one statistically significant difference in the perceptions of nurses on the preferred frequency of performing the teaching activities. Results of the Scheffé test ($p \leq 0.10$) showed that nurses with 6-10 years of experience as a registered nurse perceived that they should encourage patients to make informed decisions more frequently than did nurses with more than ten years of experience.

Process helper. For items representing the role of process helper, the analysis of variance revealed statistically significant mean differences on the actual performance of two teaching activities, but not on the preferred frequency. According to the Scheffé test, nurses with 6-10 years of experience as a registered nurse perceived that they assisted patients to

Table 13

Differences on Actual and Preferred Frequencies of Teaching Activities by Years Worked as a Registered Nurse

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=29)	2. 6 - 10 yrs. $\bar{X}$ (N=21)	3. Over 10 yrs. $\bar{X}$ (N=37)	F	Significantly Different Groups
Catalyst						
21 Encourage patients to make informed decisions.	A[1] S	4.79	4.90	4.50	3.73*	2>3
Process Helper						
9 Assist patients to identify learning needs.	A	3.14	3.86	3.51	4.01*	2>1
18 Actively involve patients in determining acceptable solutions.	A	3.34	4.00	3.66	4.11*	2>1

Table 13 (continued)

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=29)	2. 6 - 10 yrs. $\bar{X}$ (N=21)	3. Over 10 yrs. $\bar{X}$ (N=37)	F	Significantly Different Groups
Resource Linker						
20 Discuss resources within family and/or significant others.	A	3.38	4.14	3.72	3.75*	2>1
26 Use various sources to obtain current knowledge.	A	3.24	3.90	4.05	7.86***	2>1, 3>1
27 Collaborate with other health professionals.	A	3.48	4.05	4.11	3.99*	3>1
30 Encourage family participation.	A	3.55	4.29	3.97	3.71*	2>1

Table 13 (continued)

	Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=29)	2. 6 - 10 yrs. $\bar{X}$ (N=21)	3. Over 10 yrs. $\bar{X}$ (N=37)	F	Significantly Different Groups
Resource Linker (continued)							
31	Provide appropriate resources.	A	2.69	3.65	3.53	7.03**	2>1, 3>1
32	Help patients make personal application of information.	A	2.71	3.52	3.22	3.89*	2>1

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

identify learning needs, and also actively involved patients in determining acceptable solutions to their health problems significantly more frequently than did nurses with less than six years of experience.

Solution giver. For items representing the role of solution giver, there were no statistically significant mean differences in the perceptions of nurses on the basis of years of experience as a registered nurse.

Resource linker. The analysis of variance for items representing the role of resource linker revealed that statistically significant mean differences existed on the actual performance of six teaching activities. Results of the Scheffé test showed that nurses with more than ten years of experience ($\bar{X}=4.11$) as a registered nurse perceived that they collaborated with other health professionals when developing a comprehensive teaching plan more frequently than did nurses with less than six years of experience ($\bar{X}=3.48$).

Results of the Scheffé test showed that nurses with 6-10 years of experience perceived that they performed the following teaching activities more frequently than nurses with less than six years of experience:

20. Discuss with patients the resources they have within their family and/or significant others.

30. Encourage family participation in the teaching plan.

32. Help patients make personal application of information when audiovisual or reading materials are used.

In addition, nurses with 6-10 years and over ten years of experience perceived that they performed the following teaching activities more frequently than did nurses with less than six years of experience:

26. Use various sources to obtain current knowledge to plan and implement my teaching.

31. Provide patients with appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.

A low perception of the actual performance was found for teaching activities 31 and 32. For both, the mean responses of nurses with less than six years of experience was interpreted to be less frequent than some of the time, while the mean responses of nurses with over six years of experience was less frequent than most of the time.

There were no statistically significant mean differences found in the perceptions of nurses on the preferred frequency of performing the teaching activities when considered on the basis of years of experience as a registered nurse.

Summary. The results of the one-way analysis of variance revealed that only eight items indicated statistically significant mean differences on the actual frequency of performing the teaching activities when analyzed by years of experience as a registered nurse. Generally, nurses with less than six years of experience as a registered nurse perceived that they performed the teaching activities less frequently than did nurses with more experience.

It would appear that length of experience as a registered nurse had the greatest effect on the actual frequency with which nurses performed the teaching activities for the preassigned role of resource linker. Similarly, the number of years since graduation with a diploma in nursing appeared to affect the nurses actual performance of the teaching activities within this role. It is possible that the higher ratings by nurses who worked longer and graduated earlier were related to knowledge gained from experience.

With one exception, the number of years of experience as a registered nurse did not influence the nurses' perceptions of how frequently they should perform the teaching activities.

Present Position

Only two groups were analyzed, general staff nurses and supervisors. The category of supervisor included both unit supervisors and assistant unit supervisors. The category of patient teacher was not used because of the small number in the sample. The items which indicated statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities according to present position are shown in Table 14.

Catalyst. The data analysis for items representing the role of catalyst revealed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities and their present position. On the actual performance, supervisors

Table 14

Differences on Actual and Preferred Frequencies of Teaching Activities by Present Position

	Teaching Activities		Staff Nurse $\bar{X}$ (N=69)	Supervisor $\bar{X}$ (N=14)	t
Catalyst					
3	Stimulate patient's problem-solving ability.	A[1] S	4.72	4.31	2.11*
21	Encourage patients to make informed decisions.	A	3.93	4.46	-2.00*
29	Encourage patients to practice skills.	S	4.78	4.31	2.52*
Process Helper					
1	Establish a helping relationship.	S	4.79	4.43	2.38*
Solution Giver					
15	Give meaningful information.	S	4.83	4.57	1.99*
Resource Linker					
20	Discuss resources within family and/or significant others.	A	3.53	4.23	-2.41*
22	Assist patients to identify support systems.	A	3.55	4.15	-3.08**

**$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

perceived that they encouraged patients to make informed decisions more frequently than did staff nurses.

On the preferred performance, staff nurses perceived that they should stimulate the patient's problem-solving ability, and encourage patients to practice skills significantly more often than did supervisors.

Process helper. For items representing the role of process helper, there were no differences by position found on the actual performance of the teaching activities. There was, however, a statistically significant difference in the perceptions of nurses on the preferred frequency of performing one teaching activity. The staff nurses perceived that they should establish a helping relationship with patients more frequently than did supervisors.

Solution giver. Similarly as on the role of process helper, for items representing the role of solution giver, there were no statistically significant mean differences found on the actual performance of the teaching activities. There was a statistically significant difference in the perceptions of nurses on the preferred frequency of performing one teaching activity. The staff nurses perceived that they should give patients meaningful information more frequently than did supervisors.

Resource linker. For items representing the role of resource linker, a statistically significant mean difference existed on the actual but not on the preferred frequency of performing the teaching activities. The supervisors perceived that they discussed with patients the resources within family and/or significant others, and assisted patients to identify support systems more frequently than did staff nurses. The perceptions of how frequently nurses should perform the teaching activities were not influenced by the nurses' position.

Summary. For the three teaching activities that indicated statistically significant mean differences on the actual performance, the supervisors' perceptions of how frequently they performed the teaching activities were significantly higher than were the perceptions of staff nurses. In contrast, for the four teaching activities that indicated statistically significant mean differences on the preferred performance, the staff nurses' perceptions of how frequently they should perform the teaching activities were significantly higher than were the perceptions of supervisors.

Patient teachers. A review of the five patient teachers' responses on how frequently they performed the teaching activities revealed that, except for four items, the patient teachers perceived that they performed the teaching activities either always or most of the time. The mean responses for the actual frequency of performing the teaching activities ranged from 3.8 to 5.0, with only one teaching activity receiving a mean response of less than most of the time. Similarly, as on the reports of staff nurses and supervisors, item 17, *I ask patients what their usual approach is to solving problems*, received the lowest rating. The patient teachers reported that they always performed the following teaching activities:

1. I establish a helping relationship with patients in their learning.
7. I encourage patients to ask questions about their care and treatment.
29. I encourage patients to practice, with my assistance, the skills they are learning.
12. I suggest solutions that have worked for others in similar situations.
14. I find that my teaching effort consists of giving patients health care information.
15. I give patients information that is meaningful to them.
24. I share health care information with patients and families at a level they can understand.
37. I am not afraid to admit "I don't know" in answering a question.
31. I provide patients with appropriate resources to enhance learning.

Interestingly, five of these nine teaching activities were included within the preassigned role of solution giver.

The mean scores for the preferred frequency ranged from 4.4 to 5.0, indicating that patient teachers perceived that they should perform the teaching activities most of the time or always.

Length of Experience in Present Position

For the purposes of data analysis, the number of years that general staff nurses and supervisors were employed in their present position were grouped into three categories: less than four years, 4-6 years, and over six years. The patient teachers' responses were not included in the analysis. The items which showed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities according to length of time employed in present position are presented in Table 15.

Catalyst. For items representing the role of catalyst, there were no statistically significant mean differences in the perceptions of general staff nurses and supervisors on the actual or the preferred frequency of performing the teaching activities according to years in present position.

Process helper. The analysis of variance for items representing the role of process helper revealed no significant mean differences on the actual frequency of performing the teaching activities. There was, however, a statistically significant difference between the perceptions of general staff nurses and supervisors on the preferred frequency of performing one teaching activity. The results of the Scheffé test showed that nurses who were employed in their present position for less than four years and those between 4-6 years perceived that they should assist patients to formulate long- and short-term goals more frequently than did nurses who were employed in their present position for more than six years.

Solution giver. For items related to the role of solution giver, statistically significant mean differences existed only on the actual frequency of performing teaching activities. Results of the Scheffé test revealed that nurses who were employed in their present position between 4-6 years and more than six years perceived that they gave patients health care information more frequently than did nurses who were employed in their present position for less than four years. Nurses who were employed in their present position for less than four years and between 4-6 years perceived that patients and families relied on their information more frequently than did nurses employed in their present position for more than six years. There were no significant differences on the preferred frequency of performing teaching activities when considered on the basis of length of time employed in present position.

Resource linker. The analysis of variance revealed that a statistically significant mean difference existed on the actual, but not on the preferred performance of the teaching

Table 15

Differences on Actual and Preferred Frequencies of Teaching Activities by Length of Time Employed in Present Position

Teaching Activities		1. Under 4 yrs. $\bar{X}$ (N=41)	2. 4 - 6 yrs. $\bar{X}$ (N=22)	3. Over 6 yrs. $\bar{X}$ (N=20)	F	Significantly Different Groups
Process Helper						
10 Assist patients to formulate long- and short-term goals.	A S	4.54	4.60	3.94	3.68*	1>3, 2>3
Solution Giver						
14 Give patients health care information.	A	3.46	4.00	4.26	7.92***	2>1, 3>1
23 Patients and families rely on my information.	A	4.05	4.05	3.40	6.33**	1>3, 2>3

Table 15 (continued)

	Teaching Activities		1. Under 4 yrs. $\bar{X}$ (N=41)	2. 4 - 6 yrs. $\bar{X}$ (N=22)	3. Over 6 yrs. $\bar{X}$ (N=20)	F	Significantly Different Groups
	Resource Linker						
13	Suggest a variety of educational resource materials.	A	3.00	3.18	3.68	3.40*	3>1

$^{***}p \leq 0.001$; $^{**}p \leq 0.01$; $^{*}p \leq 0.05$

[1]A represents actual performance; S represents preferred performance

activities assigned to the role of resource linker. According to the Scheffé test, nurses who were employed in their present position for more than six years perceived that they suggested a variety of educational resource materials that patients might find useful in meeting learning needs more frequently than did nurses employed in their present position for less than four years.

Summary. There were three statistically significant differences on the actual performance and one signficant difference on the preferred performance of the teaching activities according to years in present position. It was noted that the mean responses of general staff nurses and supervisors lacked consistency on the basis of length of time employed in present position. In general, the length of time general staff nurses and supervisors were employed in their present position was not a highly influential variable in the nurses' perceptions of their actual or preferred performance.

Present Area of Nursing Practice

The perception of teaching activities according to four nursing practice areas were analyzed: medicine, surgery, obstetrics, and rehabilitation. Patient teachers' responses were not included in the analysis as they indicated that they worked in several practice areas. The items which reached statistically significant mean differences on the actual and preferred frequencies of performing teaching activities according to present area of nursing practice are presented in Table 16.

Catalyst. The results of the analysis of variance for items related to the role of catalyst revealed significant mean differences between the responses of general staff nurses and supervisors on the actual and preferred frequencies of performing the teaching activities and their present area of nursing practice. Results of the Scheffé test showed that nurses on obstetrics perceived that they were and should be able to judge the most opportune moment to teach patients and families significantly more frequently than did nurses on rehabilitation. Similarly, nurses on medicine and surgery perceived that they should be able to judge the most opportune moment to teach significantly more frequently than did nurses on rehabilitation.

Table 16

Differences on Actual and Preferred Frequencies of Teaching Activities by Present Area of Nursing Practice

	Teaching Activities		1. Med $\bar{X}$ (N=20)	2. Surg $\bar{X}$ (N=23)	3. Obs $\bar{X}$ (N=27)	4. Rehab $\bar{X}$ (N=13)	F	Significantly Different Groups
Catalyst								
2	Am able to judge the most opportune moment to teach.	A[1]	3.75	3.83	4.07	3.23	4.46**	3>4
		S	4.53	4.64	4.81	3.64	7.70***	1>4, 2>4, 3>4
29	Encourage patients to practice skills.	A	3.74	4.39	4.33	4.08	2.99*	2>1
Process Helper								
1	Establish a helping relationship.	A	3.70	4.13	4.44	3.77	5.42**	3>1, 3>4
		S	4.47	4.96	4.85	4.36	6.18***	2>1, 2>4 3>1, 3>4

Table 16 (continued)

	Teaching Activities		1. Med $\bar{X}$ (N=20)	2. Surg $\bar{X}$ (N=23)	3. Obs $\bar{X}$ (N=27)	4. Rehab $\bar{X}$ (N=13)	F	Significantly Different Groups
Process Helper (continued)								
5	Validate learning needs with the patient.	S	4.63	4.73	4.85	4.09	4.01*	2>4, 3>4
16	Consider the patient's readiness to learn before teaching.	S	4.68	4.91	4.88	4.36	3.51*	2>4, 3>4
Solution Giver								
6	Am able to judge how much information a patient can "handle" or "needs to know."	A	3.58	4.00	4.15	3.92	3.13*	3>1
15	Give meaningful information.	A	3.84	4.17	4.41	4.15	2.73*	3>1

Table 16 (continued)

Teaching Activities		1. Med $\bar{X}$ (N=20)	2. Surg $\bar{X}$ (N=23)	3. Obs $\bar{X}$ (N=27)	4. Rehab $\bar{X}$ (N=13)	F	Significantly Different Groups
Solution Giver (continued)							
23 Patients and families rely on my information.	A	3.95	4.30	3.78	3.31	6.11***	1>4, 2>3 2>4
35 Identify alternative solutions.	A	3.37	3.82	4.00	4.00	3.04*	3>1
Resource Linker							
31 Provide appropriate resources.	A	2.84	2.78	3.50	3.67	3.78*	--
36 Identify appropriate community resources.	A	2.84	3.55	3.64	3.58	2.95*	3>1

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$; [1]A represents actual performance; S represents preferred performance

Nurses on surgery perceived that they encouraged patients to practice skills more frequently than did nurses on medicine.

Process helper. For items related to the role of process helper, the analysis of mean responses of general staff nurses and supervisors in four practice areas revealed statistically significant differences on both the actual and preferred frequencies of performing the teaching activities. Nurses on obstetrics perceived that they did, and should establish a helping relationship with patients more frequently than did nurses on medicine and rehabilitation. In addition, nurses on surgery perceived that they should establish a helping relationship with patients more frequently than did nurses on medicine and rehabilitation.

Nurses on surgery and obstetrics perceived that they should validate learning needs with the patient and should consider the patient's readiness to learn before teaching, more frequently than did nurses on rehabilitation.

Solution giver. Mean differences existed on the actual performance of four teaching activities. Results of the Scheffé test showed that nurses on obstetrics perceived that they performed the following teaching activities more frequently than did nurses on medicine:

6. Am able to judge how much information a patient can "handle" or "needs to know."
15. Give patients meaningful information.
35. Identify alternative solutions.

Nurses on medicine perceived that patients and families relied on their information more frequently than did nurses on rehabilitation. In addition, nurses on surgery perceived that patients and families relied on their information more frequently than did nurses on obstetrics and rehabilitation. There were no statistically significant mean differences in the perceptions of nurses on the preferred frequency of performing the teaching activities designated within the role of solution giver when considered on the basis of present area of nursing practice.

Resource linker. For items related to the role of resource linker, statistically significant mean differences were found on the actual, but not on the preferred frequency of performing the teaching activities according to present area of nursing practice. For item 31, ***I provide patients with appropriate resources***, the Scheffé test ($p \leq 0.10$) was unable to determine between which groups of nurses the statistically significant mean differences in perceptions of actual performance existed. For item 36, nurses on obstetrics perceived that they identified appropriate community resources for patients and their families more frequently than did nurses on medicine. The nurses' perceptions of how frequently they should perform the teaching activities within this role were not influenced by their area of nursing practice.

Summary. The analysis of variance of the mean responses of general staff nurses and supervisors in the four practice areas revealed that statistically significant differences existed on the actual performance of nine teaching activities and the preferred performance of four teaching activities. Results of the Scheffé test showed that nurses on obstetrics perceived that they performed five of the nine teaching activities that reached statistical significance on the actual performance more frequently than did nurses on medicine. On the preferred performance, nurses on surgery and obstetrics perceived that they should perform the four statistically significant teaching activities more frequently than did nurses on rehabilitation. For the two items that indicated a statistical difference on both the actual and the preferred performance, nurses on obstetrics perceived that they actually performed and should perform the two teaching activities more frequently than did nurses on rehabilitation. It would appear that the perceptions of the actual and the preferred performance of nurses on obstetrics and the preferred performance of nurses on surgery differed most frequently from the perceived actual and preferred performance of nurses on medicine and rehabilitation.

Length of Experience in Present Area

The respondents were grouped into the same three categories that were used to analyze the number of years of experience as a registered nurse: less than six years, 6-10 years, and over ten years. The patient teachers responses were not included in the analysis as they indicated that they worked in several practice areas. The items which showed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities according to length of experience in present area are presented in Table 17.

Catalyst and process helper. There were no significant mean differences on the actual or the preferred performance of the teaching activities for items representing the roles of catalyst and process helper.

Solution giver. For items relating to the role of solution giver, a statistically significant mean difference existed on the actual performance of one teaching activity. Nurses with more than ten years of experience in their present area perceived that they gave patients health care information more frequently than did nurses with less than six years and between 6-10 years of experience in their present area. No significant mean differences were found in the perceptions of general staff nurses and supervisors on the preferred frequency of performing teaching activities on the basis of length of experience in present area.

Resource linker. For items representing the role of resource linker, mean differences were found only on the actual performance of two teaching activities. Nurses with between 6-10 years of experience in their present area perceived that they discussed with patients the resources within family and/or significant others more frequently than did nurses with less than six years of experience in their present area.

For item 22, ***I assist patients to identify support systems***, results of the Scheffé test ($p \leq 0.10$) did not determine between which groups of nurses, grouped according to the length of experience in their present area, the statistically significant mean difference in perceptions of actual performance existed.

Summary. The analysis of mean responses of general staff nurses and supervisors revealed that significant differences existed only on the actual performance of three teaching

Table 17

Differences on Actual and Preferred Frequencies of Teaching Activities by Length of Experience in Present Area

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=41)	2. 6 - 10 yrs. $\bar{X}$ (N=17)	3. Over 10 yrs. $\bar{X}$ (N=24)	F	Significantly Different Groups
Solution Giver						
14 Give patients health care information.	A[1]	3.61	3.65	4.22	4.45*	3>1, 3>2
Resource Linker						
20 Discuss resources within family and/or significant others.	A	3.34	4.19	3.83	5.16**	2>1
22 Assist patients to identify support systems.	A	3.39	3.94	3.92	3.20*	–

**$p \leq 0.01$; *$p \leq 0.05$; [1]A represents actual performance activities. In general, the length of experience in their present area was not a highly influential variable in the general staff nurses' and supervisors' perceptions of their actual or preferred frequency of performing the teaching activities.

Length of Experience in Patient Teaching

The respondents were grouped into the same three categories as were used to analyze the variable, length of experience in present area: less than six years, 6-10 years, and over ten years. The items which showed statistically significant mean differences on the actual and preferred frequencies of performing the teaching activities according to the number of years the nurses included patient teaching in their nursing care, are presented in Table 18.

Catalyst. The results of the analysis of variance for items representing the role of catalyst revealed one statistically significant difference on the actual performance and another on the preferred performance of the teaching activities. On the actual performance, nurses who included patient teaching in their nursing care for more than ten years perceived that they provided written instructions for patients more frequently than did nurses who included patient teaching for less than six years. On the preferred performance, nurses who included patient teaching in their nursing care between 6-10 years perceived that they should encourage patients to make informed decisions more frequently than did nurses who included patient teaching for more than ten years.

Process helper. The analysis of variance for items representing the role of process helper revealed that a statistically significant mean difference existed on the actual but not on the preferred performance of the teaching activities. Nurses who included patient teaching in their nursing care for between 6-10 years and more than ten years perceived that they assisted patients to identify learning needs more frequently than did nurses who included patient teaching for less than six years.

Solution giver. The results of the analysis of variance for items representing the role of solution giver revealed one statistically significant difference on the actual and one on the preferred performance of the teaching activities. On the actual performance, nurses who

Table 18

Differences on Actual and Preferred Frequencies of Teaching Activities by Number of Years Nursing Care Included Patient Teaching

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=32)	2. 6 - 10 yrs. $\bar{X}$ (N=24)	3. Over 10 yrs. $\bar{X}$ (N=32)	F	Significantly Different Groups
Catalyst						
21 Encourage patients to make informed decisions.	A[1]					
	S	4.72	4.91	4.50	3.27*	2>3
39 Provide written instructions.	A	2.87	3.52	3.48	3.30*	3>1
Process Helper						
9 Assist patients to identify learning needs.	A	3.09	3.75	3.65	4.66*	2>1, 3>1

Table 18 (continued)

	Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=32)	2. 6 - 10 yrs. $\bar{X}$ (N=24)	3. Over 10 yrs. $\bar{X}$ (N=32)	F	Significantly Different Groups
Solution Giver							
14	Give patients health care information.	A	3.56	4.04	4.03	3.19*	3>1
23	Patients and families rely on my information.	S	4.03	4.52	4.32	3.39*	2>1
Resource Linker							
13	Suggest a variety of educational resource materials.	A	2.90	3.33	3.68	4.91**	3>1
20	Discuss resources within family and/or significant others.	A	3.31	4.13	3.80	5.13**	2>1

Table 18 (continued)

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=32)	2. 6 - 10 yrs. $\bar{X}$ (N=24)	3. Over 10 yrs. $\bar{X}$ (N=32)	F	Significantly Different Groups
Resource Linker (continued)						
22 Assist patients to identify support systems.	A	3.34	3.88	3.90	3.33*	3>1
26 Use various sources to obtain current knowledge.	A	3.38	3.83	4.06	5.02**	3>1
27 Collaborate with other health professionals.	A	3.53	3.96	4.20	4.00*	3>1
30 Encourage family participation.	A	3.56	4.04	4.17	3.37*	3>1

Table 18 (continued)

Teaching Activities		1. Under 6 yrs. $\bar{X}$ (N=32)	2. 6 - 10 yrs. $\bar{X}$ (N=24)	3. Over 10 yrs. $\bar{X}$ (N=32)	F	Significantly Different Groups
Resource Linker (continued)						
31 Provide appropriate resources.	A	2.75	3.57	3.60	6.43**	2>1, 3>1
32 Help patients make personal application of information.	A	2.68	3.42	3.35	4.68*	2>1, 3>1

**$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

included patient teaching in their nursing care for more than ten years perceived that they gave patients health care information more frequently than did nurses who included patient teaching for less than six years. On the preferred performance, nurses who included patient teaching in their nursing care between 6-10 years perceived that patients and families should rely on them to provide information to their questions more frequently than did nurses who included patient teaching for less than six years.

Resource linker. The analysis of variance for items representing the role of resource linker revealed that statistically significant mean differences existed on the actual performance of eight teaching activities. Nurses who included patient teaching in their nursing care between 6-10 years perceived that they discussed with patients the resources within family and/or significant others more frequently than did nurses who included patient teaching for less than six years.

Nurses who included patient teaching in their nursing care for more than ten years perceived that they performed the following teaching activities more frequently than did nurses who included patient teaching for less than six years:

13. Suggest a variety of educational resource materials that patients may find useful in meeting their learning needs.

22. Assist patients to identify support systems.

26. Use various sources to obtain current knowledge to plan and implement teaching.

27. Collaborate with other health professionals when developing a comprehensive teaching plan.

30. Encourage family participation in the teaching plan.

Of these five teaching activities, the lowest perception of actual performance was found on item 13. Nurses with less than six years of patient teaching experience indicated that they suggested a variety of educational resource materials less than some of the time, while the mean response of nurses with more than ten years of patient teaching experience was between some of the time and most of the time.

Nurses who included patient teaching in their nursing care between 6-10 years and more than ten years perceived that they provided patients with appropriate resources, and also helped patients make personal application of information, more frequently than did nurses who included patient teaching for less than six years.

These findings suggest that years of experience in patient teaching had an effect on the actual frequency that nurses performed the teaching activities for this role. However, on the preferred performance, the years of experience in patient teaching did not appear to influence the nurses' perceptions of how frequently they should perform the teaching activities. Similar findings were noted for the variable, length of experience as a registered nurse.

Summary. The analysis of variance revealed that statistically significant mean differences were found on the actual performance of eleven teaching activities and on the preferred performance of two teaching activities. Eight of the eleven statistically significant teaching activities on the actual performance were found within items representing the role of resource linker.

For the items that indicated statistically significant mean differences, the nurses who reported that they included patient teaching in their nursing care for less than six years perceived that they performed teaching activities less frequently than did nurses who had more experience. With two exceptions, the perceptions of how frequently nurses should perform the teaching activities did not appear to be influenced by the number of years of patient teaching experience.

Differences in Perceptions of Patient Teaching Factors

The third research question addressed the differences in the perceptions of registered nurses to such factors as self-perceived competence, importance, and success in patient teaching. The respondents used a five-point Likert-type rating scale to indicate their perceptions on six questions relating to these factors. The frequency and percentage distributions, and the mean responses of nurses are summarized in Table 19.

Table 19

Distribution of the Respondents' Perceptions of Patient Teaching Factors

(N = 88)

Patient Teaching Factors	Rating Scale	Frequency	Percentage	Mean
Effectiveness of nursing education preparation for patient teaching	1 Not at all	-	-	3.62
	2	8	9.3	
	3	26	30.2	
	4	43	50.0	
	5 Extremely effective	9	10.5	
Satisfaction with current qualifications for patient teaching role	1 Not at all	-	-	3.70
	2	5	5.8	
	3	24	27.9	
	4	49	57.0	
	5 Extremely satisfied	8	9.3	
Importance of patient teaching as compared to other nursing activities	1 Not at all	-	-	4.41
	2	-	-	
	3	5	5.7	
	4	42	47.7	
	5 Extremely important	41	46.6	

Table 19 (continued)

Patient Teaching Factors	Rating Scale	Frequency	Percentage	Mean
Importance of nurses teaching patients as perceived by other professionals.	1 Not at all	-	-	
	2	6	6.8	
	3	21	23.9	3.84
	4	42	47.7	
	5 Extremely important	19	21.6	
Frequency of including patient teaching in nursing care.	1 Not at all	-	-	
	2	5	5.7	
	3	13	14.8	
	4	37	42.0	4.11
	5 All of the time	33	37.5	
Perception of success in patient teaching.	1 Not at all	-	-	
	2	2	2.3	
	3	21	23.9	3.81
	4	57	64.8	
	5 Extremely successful	8	9.1	

For the first question, how effectively did your nursing education program prepare you for patient teaching, only nine respondents (10.5%) perceived that their educational preparation was extremely effective. Half of the respondents perceived it was very effective. Thirty-four respondents (39.5%) rated the effectiveness lower, that is, a 2 or 3 on the five-point scale. No respondents perceived that it was not effective. The mean response was 3.62, indicating that, as a group, the nurses perceived that their nursing education was moderately effective in preparing them for their patient teaching function.

Eight respondents (9.3%) perceived that they were extremely satisfied with their current qualifications for their role in patient teaching. Forty-nine respondents (57.0%) were very satisfied, and the remaining 29 respondents (33.7%) rated their satisfaction as a 2 or 3 on the five-point scale. Similarly as on response to the first question, no respondents perceived that they were not at all satisfied with their current qualifications. The mean response was 3.70, indicating that, as a group, the nurses perceived that they were moderately to very satisfied with their current qualifications for their role in patient teaching.

The importance of patient teaching as compared to other nursing activities was rated high by the respondents. Almost half of the respondents (46.6%) perceived that patient teaching was extremely important. Forty-two respondents (47.7%) perceived it was very important, and the remaining five respondents (5.7%) rated its importance as moderate. The mean response of 4.41 indicated that, as a group, the nurses perceived patient teaching to be very important.

The respondents' perceptions of the importance that other professionals (physicians, nursing administrators, other nurses) attributed to the nurses' involvement in teaching patients and families was lower than the respondents' own perception of the importance of patient teaching. Nineteen respondents (21.6%) perceived that other professionals viewed nurses' teaching patients and families as extremely important. Almost half of the respondents (47.7%) perceived that other professionals viewed nurses' teaching patients and families to be very important, and the remaining 27 respondents (30.7%) rated the importance as slight or moderate. No respondents perceived that other professionals viewed nurses' teaching patients and families as not important. The mean response of 3.84 indicated that, as a group, the nurses perceived that other professionals viewed nurses' teaching patients and families as moderately to very important.

A large majority of the respondents (79.5%) perceived that, in their present position, they included patient teaching in their nursing care all of the time or most of the time. Eighteen respondents (20.5%) rated the frequency that they included patient teaching as infrequent or some of the time. No respondents reported that they did not include patient teaching in their nursing care. The mean response was 4.11, indicating that, as a group, the nurses perceived that they included patient teaching in their nursing care most of the time.

For the last question, how successful do you view yourself in patient teaching, only eight respondents (9.1%) perceived that they were extremely successful. Fifty-seven respondents (64.8%) rated their success as very successful, 21 respondents (23.9%) rated it as moderate, and only two respondents (2.3%) rated it as somewhat successful. No respondents perceived that they were not successful in patient teaching. The mean response was 3.81, indicating that, as a group, the nurses perceived they were moderately to very successful in patient teaching.

Summary. The two lowest mean scores received on the patient teaching factors related to self-perceived competence. Nurses perceived that their nursing education preparation for patient teaching was moderately effective, and that they were moderately to very satisfied with their current qualifications for their patient teaching role. The two highest mean scores on the patient teaching factors indicated that nurses perceived that patient teaching was very important, and that they included it in their nursing care most of the time.

Differences in Perceptions of Patient Teaching Factors Related to Personal and Professional Characteristics

The fourth research question asked to what extent the perceptions of patient teaching factors were related to such personal and professional characteristics of nurses as age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience. The perceptions of patient teaching factors which showed significant mean differences on the personal and professional characteristics are identified and discussed in this section.

Age

The analysis of variance of the mean responses of nurses in three different age categories revealed statistically significant differences on three patient teaching factors as shown in Table 20. For all three patient teaching factors, the mean responses of nurses between 30-44 years were significantly higher than the mean responses of nurses under 30 years of age. The nurses between 30-44 years perceived a greater degree of satisfaction with their current qualifications for their patient teaching role and a greater degree of success in patient teaching than did nurses under 30 years of age. The nurses between 30-44 years perceived that other professionals (physicians, nursing administrators, other nurses) viewed nurses teaching patients and families to be of greater importance than did nurses under 30 years of age.

Nursing Education

Baccalaureate degree or diploma. The data analysis revealed one statistically significant mean difference on the patient teaching factors between nurses with a baccalaureate degree or a diploma in nursing as their highest level of nursing education (Table 21). Nurses with a baccalaureate degree perceived that their nursing education program was more effective in preparing them for patient teaching than did diploma nurses.

Table 20

Significant Differences on Patient Teaching Factors by Age

Patient Teaching Factors	1. Under 30 yrs. $\bar{X}$ (N=33)	2. 30 - 44 yrs. $\bar{X}$ (N=38)	3. Over 44 yrs. $\bar{X}$ (N=16)	F	Significantly Different Groups
Satisfaction with current qualifications for patient teaching role	3.44	3.92	3.67	4.18*	2>1
Importance of nurses teaching patients as perceived by other professionals	3.55	4.03	4.06	3.72*	2>1
Perception of success in patient teaching	3.67	4.00	3.63	3.51*	2>1

*$p \leq 0.05$

Table 21

Significant Differences on Patient Teaching Factors
by Highest Level of Nursing Education

Patient Teaching Factor	BN/BScN $\bar{X}$ (N=19)	Diploma $\bar{X}$ (N=69)	t
Effectiveness of nursing education preparation for patient teaching	4.00	3.51	2.44*

*$p \leq 0.05$

Post-basic or basic baccalaureate nursing education. There were no significant differences in the perceptions of eight post-basic and eleven basic baccalaureate degree nurses on the patient teaching factors.

Year Completed Highest Level of Nursing Education

The analysis of variance showed no statistically significant differences by the year nurses graduated with a diploma or with a degree in their perceptions of the effectiveness of their preparation for patient teaching.

Content Areas Included in Educational Programs

For two content areas, interpersonal communication skills and nursing process, there were no significant differences in the perceptions of nurses on any patient teaching factors when considered on the basis of whether or not the content was included in their education.

For three content areas, teaching/learning theory, problem-solving process, and change theory, significant differences were found on one patient teaching factor as shown in Table 22. The nurses who indicated that these content areas were included in their education perceived that their program prepared them more effectively for patient teaching than did those nurses who did not have these content areas included.

Years of Experience as a Registered Nurse

The analysis of the mean responses of nurses revealed no statistically significant differences in the responses of nurses on the patient teaching factors by the years of experience as a registered nurse.

Present Position

The results of the data analysis revealed no statistically significant mean differences in the perceptions of 69 general staff nurses and fourteen supervisors on the patient teaching factors by present position.

Length of Experience in Present Position

The analysis of variance revealed no significant differences in the perceptions of general staff nurses and supervisors on the patient teaching factors when considered on the basis of length of time employed in their present position.

Present Area of Nursing Practice

The analysis of variance revealed statistically significant differences in the perceptions of general staff nurses and supervisors on two patient teaching factors when considered on the

Table 22

Significant Differences on Patient Teaching Factors by Content Areas Included in Education

Patient Teaching Factor	Content Included $\bar{X}$	Content Not Included $\bar{X}$	t
Teaching/Learning Theory	(N=65)	(N=23)	
Effectiveness of nursing education preparation for patient teaching	3.77	3.18	3.10**
Problem-Solving Process	(N=70)	(N=18)	
Effectiveness of nursing education preparation for patient teaching	3.72	3.22	2.42*
Change Theory	(N=33)	(N=53)	
Effectiveness of nursing education preparation for patient teaching	3.97	3.40	3.43***

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

basis of present area of nursing practice (Table 23). Nurses on obstetrics perceived the importance of patient teaching as compared to other nursing activities to be greater than did nurses on surgery and rehabilitation. Results of the Scheffé test also revealed that nurses on obstetrics perceived that they included patient teaching in their nursing care more regularly than did nurses on medicine and rehabilitation.

Length of Experience in Present Area

The analysis of variance revealed statistically significant mean differences in the perceptions of general staff nurses and supervisors on two patient teaching factors when considered on the basis of length of experience in present area of nursing practice (Table 24). Nurses with between 6-10 years and over ten years of experience in their present area of nursing practice perceived a greater degree of satisfaction with their current qualifications for patient teaching than did nurses with less than six years of experience. Nurses with more than ten years of experience in their present area of nursing practice also perceived that other professionals (physicians, nursing administrators, other nurses) viewed nurses teaching patients and families to be of greater importance than did nurses with less than six years of experience.

Length of Experience in Patient Teaching

The analysis of variance revealed a statistically significant mean difference in the perceptions of nurses on one patient teaching factor when considered on the basis of the number of years their nursing care included patient teaching (Table 25). Nurses who included patient teaching in their nursing care for more than ten years perceived a greater degree of satisfaction with their current qualifications for patient teaching than did nurses who included patient teaching for less than six years.

Table 23

Significant Differences on Patient Teaching Factors by Present Area of Nursing Practice

Patient Teaching Factors	1. Med $\bar{X}$ (N=20)	2. Surg $\bar{X}$ (N=23)	3. Obs $\bar{X}$ (N=27)	4. Rehab $\bar{X}$ (N=13)	F	Significantly Different Groups
Importance of patient teaching as compared to other nursing activities	4.35	4.22	4.70	4.15	4.18**	3>2, 3>4
Frequency of including patient teaching in nursing care	3.70	4.13	4.48	3.62	5.24**	3>1, 3>4

**$p \leq 0.01$

Table 24

Significant Differences on Patient Teaching Factors by Length of Experience in Present Area

Patient Teaching Factors	1. Under 6 yrs. $\bar{X}$ (N=41)	2. 6 - 10 yrs. $\bar{X}$ (N=17)	3. Over 10 yrs. $\bar{X}$ (N=24)	F	Significantly Different Groups
Satisfaction with current qualifications for patient teaching role	3.44	3.94	3.83	4.09*	2>1, 3>1
Importance of nurses teaching patients as perceived by other professionals	3.59	3.82	4.17	3.91*	3>1

*$p \leq 0.05$

Table 25

Significant Differences on Patient Teaching Factors by Number of Years Nursing Care Included Patient Teaching

Patient Teaching Factor	1. Under 6 yrs. $\bar{X}$ (N=32)	2. 6 - 10 yrs. $\bar{X}$ (N=24)	3. Over 10 yrs. $\bar{X}$ (N=32)	F	Significantly Different Groups
Satisfaction with current qualifications for patient teaching role	3.42	3.74	3.94	4.46*	3>1

*$p \leq 0.05$

Differences in Perceptions of Change Agent Roles Related to Patient Teaching Factors

The last research question addressed the extent to which the perceptions of the change agent roles were related to such factors as self-perceived competence, importance and success in patient teaching. The items which showed statistically significant mean differences on the patient teaching factors are identified and discusssed within the four roles of a change agent in the following paragraphs.

The mean response of nurses on the patient teaching factor, effectiveness of nursing education preparation for patient teaching, was 3.62. For the purposes of these analyses, the nurses were grouped into two categories according to their level of effectiveness (Table 26): one group included those who had a lower perception of their effectiveness (2 or 3), while the second group included those who had a higher perception of their effectiveness (4 or 5).

Catalyst. The data analysis for items assigned to the role of catalyst revealed two statistically significant differences in the mean responses of nurses on the actual frequency of performing teaching activities by their perceived level of effectiveness of their preparation for patient teaching. Nurses who viewed their program as highly effective perceived that they were able to judge the most opportune moment to teach, and to encourage patients to make informed decisions, more frequently than did nurses who viewed their program as less effective.

The perceptions of how frequently nurses should perform the teaching activities did not appear to be influenced by the nurses' perceptions of how effectively their nursing education prepared them for patient teaching.

Process helper. Similarly to the results for the role of catalyst, the data analysis for teaching activities presupposed within the role of process helper revealed two statistically significant mean differences on the actual performance, but none on the preferred performance. Nurses who rated their nursing education program as highly effective considered the patient's readiness to learn before teaching and actively involved patients in determining acceptable solutions more frequently than did nurses who rated their program as less effective.

Table 26

Differences on Actual and Preferred Frequencies of Teaching Activities by Effectiveness of Nursing Education Preparation

	Teaching Activities		Low $\bar{X}$ (N=34)	High $\bar{X}$ (N=52)	t
Catalyst					
2	Am able to judge the most opportune moment to teach.	A[1]	3.65	4.00	-2.33*
21	Encourage patients to make informed decisions.	A	3.82	4.22	-2.00*
Process Helper					
16	Consider the patient's readiness to learn before teaching.	A	3.79	4.16	-2.15*
18	Actively involve patients in determining acceptable solutions.	A	3.38	3.80	-2.27*
Solution Giver					
8	Give appropriate professional advice.	A	4.03	4.31	-2.04*
24	Share health care information at a level patients and families can understand.	A	4.21	4.51	-2.14*

*$p \leq 0.05$; [1] A represents actual performance

Solution giver. The data analysis for items assigned to the role of solution giver revealed two statistically significant mean differences on the actual performance, but none on the preferred performance of the teaching activities. Nurses who perceived their nursing education program as highly effective gave appropriate professional advice and shared health care information at a level patients and families could understand more frequently than did nurses who perceived their program as less effective.

Resource linker. For items assigned to the role of resource linker, there were no significant differences on the basis of the effectiveness of their nursing education preparation for patient teaching.

Summary. The results of the data analysis revealed significant differences on the actual performance of two different teaching activities for each of the three preassigned roles, catalyst, process helper, and solution giver. For each of these six teaching activities, nurses who considered their program as highly effective perceived that they performed the teaching activities more frequently than did nurses who considered their program as less effective.

Satisfaction With Current Qualifications

The mean response of nurses on the patient teaching factor, satisfaction with current qualifications for the patient teaching role, was 3.70. For the purposes of these data analyses, the nurses were grouped into two categories according to their perceived satisfaction with current qualifications (Table 27): one group included those who had a lower perception of their satisfaction (2 or 3), while the second group included those who had a higher perception of their satisfaction (4 or 5).

Catalyst. The data analysis for items representing the role of catalyst revealed five statistically significant differences in the mean responses of nurses on the actual frequency of performing the teaching activities by the level of satisfaction with current qualifications. Nurses who expressed a high degree of satisfaction with their current qualifications for patient teaching perceived that they performed the five teaching activities more frequently than did nurses who identified less satisfaction. Of the five teaching activities which reached statistical

Table 27

Differences on Actual and Preferred Frequencies of Teaching Activities by Satisfaction with Current Qualifications

Teaching Activities			Low $\bar{X}$ (N=29)	High $\bar{X}$ (N=57)	t
Catalyst					
4	Encourage patients to want to learn.	A[1]	3.66	4.14	-2.44*
7	Encourage questions.	A	4.41	4.70	-2.15*
11	Help patients focus attention on accomplishing desired goals.	A	3.31	3.77	-2.09*
21	Encourage patients to make informed decisions.	A	3.72	4.24	-2.53*
33	Encourage adopting behaviors that will improve health.	A	3.55	4.16	-3.21**
Process Helper					
1	Establish a helping relationship.	A	3.90	4.28	-2.38*
5	Validate learning needs with the patient.	A	3.50	4.00	-2.57*
9	Assist patients to identify learning needs.	A	3.17	3.68	-2.55*

Table 27 (continued)

	Teaching Activities		Low $\bar{X}$ (N=29)	High $\bar{X}$ (N=57)	t
	Process Helper (continued)				
10	Assist patients to formulate long- and short-term goals.	A	2.79	3.44	-3.22**
18	Actively involve patients in determining acceptable solutions.	A	3.38	3.76	-2.01*
25	Relate new learning to patient's past experiences.	A	3.34	3.96	-2.98**
34	Assist patients in evaluating their progress.	A	3.25	3.71	-2.37*
38	Attempt to determine the reason(s) when learning has not occurred.	A	3.72	4.19	-2.66**
	Solution Giver				
6	Am able to judge how much information a patient can "handle" or "needs to know."	A	3.71	4.09	-2.52*
8	Give appropriate professional advice.	A	4.00	4.30	-2.12*
35	Identify alternative solutions.	A	3.54	4.00	-2.65**

Table 27 (continued)

	Teaching Activities		Low $\bar{X}$ (N=29)	High $\bar{X}$ (N=57)	t
	Resource Linker				
20	Discuss resources within family and/or significant others.	A	3.31	3.95	-3.02**
22	Assist patients to identify support systems.	A	3.41	3.88	-2.18*
26	Use various sources to obtain current knowledge.	A	3.31	3.95	-3.19**
27	Collaborate with other health professionals.	A	3.54	4.04	-2.26*
30	Encourage family participation.	A	3.59	4.11	-2.50*
31	Provide appropriate resources.	A	2.79	3.56	-3.25**
32	Help patients make personal application of information.	A	2.64	3.41	-3.32***
36	Identify appropriate community resources.	A	3.10	3.70	-2.62**

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance

significance, the lowest perception of actual performance was found on item 11, *I help patients focus their attention on accomplishing desired goals*; and the highest was found on item 7, *I encourage questions*.

The perceptions of how frequently nurses should perform teaching activities were not influenced by their satisfaction with their current qualifications for patient teaching.

Process helper. The data analysis for items representing the role of process helper revealed eight statistically significant mean differences on the actual performance, but none on the preferred performance of the teaching activities. Similarly as on the findings for the role of catalyst, nurses who were more satisfied with their current qualifications for patient teaching perceived that they performed the eight teaching activities more frequently than did nurses with less satisfaction. Of the eight teaching activities, the lowest perception of actual performance was found on item 10, *I assist patients to formulate long- and short-term goals appropriate to their learning needs*; and the highest was found on item 1, *I establish a helping relationship*.

Solution giver. For items representing the role of solution giver, three statistically significant mean differences were found on the actual frequency of performing the teaching activities. The nurses who expressed greater satisfaction with their current qualifications perceived that they were able to judge how much information a patient could "handle" or "needs to know," gave appropriate professional advice, and identified alternative solutions more frequently than did nurses who expressed less satisfaction.

Resource linker. The data analysis for items representing the role of resource linker revealed eight statistically significant mean differences on the actual frequency of performing the teaching activities. As with previous findings, nurses who had a greater degree of satisfaction with their current qualifications for patient teaching perceived that they performed the eight teaching activities more frequently than did nurses who identified less satisfaction.

The lowest perceptions of actual performance, that is, a frequency of less than some of the time by nurses who expressed a lesser degree of satisfaction with their current qualifications for their patient teaching role were found on two teaching activities:

31. I provide patients with appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.

32. I help patients make personal application of information when audiovisual or reading materials are used.

For these two teaching activities, the perceptions of nurses who expressed a greater degree of satisfaction with their current qualifications were somewhat higher, that is, between some of the time and most of the time.

Nurses who expressed lesser satisfaction with their current qualifications perceived that they collaborated with other health professionals and encouraged family participation in the teaching plan between some of the time and most of the time, while nurses who identified a greater degree of satisfaction perceived their performance to be between most of the time and always.

Summary. The results of the data analysis revealed 24 statistically significant differences in the mean responses of nurses on the actual frequency of performing teaching activities according to their satisfaction with their current qualifications. In each instance, nurses who expressed greater satisfaction with their current qualifications for their patient teaching role perceived that they performed the teaching activities more frequently than did nurses who identified less satisfaction. The findings suggest that the actual frequency with which the nurses performed the teaching activities related to their level of satisfaction with their current qualifications for patient teaching, particularly for items designated as representing functions within the roles of process helper and resource linker. The perceptions of how frequently nurses should perform the teaching activities, however, were not influenced by the nurses' satisfaction with their current qualifications for patient teaching.

Nurses' Perceptions of the Importance of Patient Teaching

The mean response of nurses on the patient teaching factor, importance of patient teaching as compared to other nursing activities, was 4.41. For the purposes of these analyses, the nurses where grouped into two categories according to their perceived importance of patient teaching (Table 28): one group included those who had a lower perception (3 or 4), while the second group included those who had a high perception (5).

Catalyst. The data analysis for items related to the role of catalyst revealed statistically significant differences in the mean responses of nurses on the actual and preferred frequencies of performing the teaching activities according to the nurses' perceptions of the importance of patient teaching. Nurses for whom patient teaching was extremely important perceived that they encouraged patients to make informed decisions and to practice skills more frequently than did nurses for whom patient teaching was somewhat less important. Nurses for whom patient teaching was extremely important also perceived that they did and should encourage patients to adopt behaviors that would improve health more frequently than did nurses for whom patient teaching was somewhat less important. On the preferred performance, nurses for whom patient teaching was extremely important perceived that they should be able to judge the most opportune moment to teach more frequently than did nurses for whom patient teaching was somewhat less important.

Process helper. The data analysis for items related to the role of process helper revealed two statistically significant differences on the actual performance and two on the preferred performance of the teaching activities. On the actual performance, nurses who indicated that patient teaching was extremely important perceived that they assisted patients in evaluating their progress and attempted to determine the reason(s) when learning had not occurred more frequently than did nurses who indicated that patient teaching was somewhat less important. On the preferred performance, the nurses who indicated that patient teaching was extremely important perceived that they should validate learning needs with the patient and assist the patient to identify learning needs more frequently than did nurses who indicated that patient teaching was somewhat less important.

Solution giver. For items related to the role of solution giver, three statistically significant differences were found on the actual performance and four statistically significant differences on the preferred performance of six teaching activities. Nurses who indicated that patient teaching was extremely important perceived that they performed and should perform

Table 28

Differences on Actual and Preferred Frequencies of Teaching Activities by Nurses' Perceptions of the Importance of Patient Teaching

	Teaching Activities		Low $\bar{X}$ (N=47)	High $\bar{X}$ (N=41)	t
	Catalyst				
2	Am able to judge the most opportune moment to teach.	A[1]			
		S	4.36	4.74	-2.49*
21	Encourage patients to make informed decisions.	A	3.87	4.28	-2.13*
29	Encourage patients to practice skills.	A	4.02	4.45	-2.53*
33	Encourage adopting behaviors that will improve health.	A	3.70	4.18	-2.46*
		S	4.56	4.81	-2.02*
	Process Helper				
5	Validate learning needs with the patient.	S	4.55	4.83	-2.08*
9	Assist patients to identify learning needs.	S	4.30	4.63	-2.14*
34	Assist patients in evaluating their progress.	A	3.34	3.80	-2.49*
38	Attempt to determine the reason(s) when learning has not occurred.	A	3.84	4.24	-2.34*

Table 28 (continued)

	Teaching Activities		Low $\bar{X}$ (N=47)	High $\bar{X}$ (N=41)	t
Solution Giver					
8	Give appropriate professional advice.	S	4.66	4.88	-2.26*
15	Give meaningful information.	S	4.67	4.93	-2.78**
24	Share health care information at a level patients can understand.	A	4.19	4.53	-2.12*
28	Take initiative to correct inaccurate information.	A S	4.15 4.69	4.58 4.92	-2.78** -2.56*
35	Identify alternative solutions.	A	3.68	4.03	-2.04*
37	Am not afraid to admit "I don't know."	S	4.78	4.95	-2.04*
Resource Linker					
31	Provide appropriate resources.	A	3.00	3.59	-2.53*

**$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

these teaching activities more frequently than did nurses who indicated that patient teaching was somewhat less important.

Resource linker. The data analysis for items related to the role of resource linker revealed one statistically significant mean difference on the actual performance, but none on the preferred performance of the teaching activities. The nurses who indicated that patient teaching was extremely important perceived that they provided patients with appropriate resources more frequently than did nurses who indicated that patient teaching was somewhat less important.

Summary. The results of the data analysis revealed nine statistically significant differences on the actual performance and eight on the preferred performance of the teaching activities when related to the perceived importance of patient teaching. For these teaching activities, the nurses who indicated that patient teaching was extremely important perceived that they performed and/or should perform these activities more frequently than did nurses who indicated that patient teaching was somewhat less important. It would appear that the nurses' perceptions of the importance of patient teaching as compared to other nursing activities had an effect on the actual and preferred frequency of performing the teaching activities.

Nurses' Perceptions of Other Professionals' Views

The mean responses of nurses on the patient teaching factor, importance of nurses' teaching patients as perceived by other professionals, was 3.84. For the purposes of these analyses, the nurses were grouped into two categories according to their perceptions of other professionals' views (Table 29): one group included those who had a lower perception (2 or 3), while the second group included those who had a higher perception (4 or 5).

Catalyst. For items related to the role of catalyst, two statistically significant differences were found in the mean responses of nurses on the actual frequency of performing the teaching activities according to the importance of nurses teaching patients as perceived by other professionals. Nurses who indicated that other professionals viewed nurses teaching

Table 29

Differences on Actual and Preferred Frequencies of Teaching Activities by Nurses' Perceptions of Other Professionals' Views

Teaching Activities		Low $\bar{X}$ (N=27)	High $\bar{X}$ (N=61)	t
Catalyst				
11 Help patients focus attention on accomplishing desired goals.	A[1]	3.26	3.72	-1.99*
39 Provide written instructions to increase commitment.	A	2.68	3.52	-3.33***
Process Helper				
1 Establish a helping relationship.	A	3.89	4.23	-1.98*
9 Assist patients to identify learning needs.	A	3.11	3.63	-2.51*
10 Assist patients to formulate long- and short-term goals.	A	2.63	3.44	-4.04***
17 Ask patients their usual approach to solving problems.	A	2.30	3.07	-3.17**
	S	3.89	4.38	-2.12*

Table 29 (continued)

Teaching Activities		Low $\bar{X}$ (N=27)	High $\bar{X}$ (N=61)	t
Resource Linker				
13 Suggest a variety of educational resource materials.	A	2.85	3.51	-2.89**
22 Assist patients to identify support systems.	A	3.23	3.89	-2.98**
31 Provide appropriate resources.	A	2.88	3.44	-2.18*

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1]A represents actual performance; S represents preferred performance

patients and families to be of great importance perceived that they helped patients focus attention on accomplishing desired goals and provided written instructions for patients more frequently than did nurses who indicated other professionals' views to be of lesser importance.

The perceptions of how frequently nurses should perform the teaching activities for this role were not influenced by their perceptions of the importance that other professionals gave to nurses teaching patient and families.

Process helper. The data analysis for items related to the role of process helper, revealed four statistically significant differences on the actual performance and one on the preferred performance of four teaching activities. The nurses who indicated that other professionals viewed nurses teaching patients and families to be of great importance perceived that they established a helping relationship and assisted patients to identify learning needs more frequently than did nurses who indicated that other professionals' views were of lesser importance. Nurses who indicated other professionals' views to be of great importance perceived that they assisted patients to formulate long- and short-term goals between some of the time and most of the time, while nurses who indicated other professionals' views to be of less importance perceived that they assisted patients to formulate goals less frequently than some of the time.

Nurses who indicated that other professionals viewed nurses teaching patients and families to be of great importance perceived that they should and did ask patients their usual approach to solving problems more frequently than did nurses who indicated a lesser importance.

Solution giver. The data analysis for items related to the role of solution giver revealed no statistically significant mean differences in the perceptions of nurses on the actual or the preferred frequency of performing the teaching activities according to other professionals' views.

Resource linker. The results of the data analysis for items related to the role of resource linker revealed three statistically significant mean differences on the actual performance, but none on the preferred performance of the teaching activities. Nurses who indicated that other professionals viewed nurses' teaching patients and families to be of great importance perceived that they assisted patients to identify support systems more frequently than did the nurses who indicated other professionals' views to be of lesser importance. Nurses who indicated that other professionals viewed nurses' teaching patients and families to be of great importance perceived that they suggested a variety of educational resource materials and provided appropriate resources between some of the time and most of the time, while the nurses who indicated other professionals' views to be less important perceived that they performed these activities less frequently than some of the time.

Summary. The results of the data analysis revealed nine statistically significant differences on the actual performance and one on the preferred performance of the teaching activities when the importance of teaching was taken into consideration. For the nine teaching activities, the nurses who indicated that other professionals viewed nurses' teaching patients and families to be of great importance perceived that they performed the teaching activities more frequently than did nurses who indicated other professionals' views to be of lesser importance. It would appear that the nurses' perceptions of the importance that other professionals gave to nurses' teaching patients and families influenced their actual frequency of performing the teaching activities.

Frequency of Including Patient Teaching in Nursing Care

The mean response of nurses on the patient teaching factor, frequency of including patient teaching in nursing care, was 4.11. For the purposes of these analyses, the nurses were grouped in two categories according to their frequency of including patient teaching in their nursing care (Table 30): one group included those who had a lower perception (2, 3, or 4), while the second group included those who had a high perception (5).

Catalyst. The results of the data analysis for items assigned to the role of catalyst revealed five statistically significant differences on the actual performance and two on the preferred performance of teaching activities. For these teaching activities, nurses who

Table 30

Differences on Actual and Preferred Frequencies of Teaching Activities by Frequency of Including Patient Teaching in Nursing Care

	Teaching Activities		Low X̄ (N=54)	High X̄ (N=33)	t
Catalyst					
2	Am able to judge the most opportune moment to teach.	A[1]	3.67	4.06	-2.82**
		S	4.39	4.76	-2.49*
11	Help patients focus attention on accomplishing desired goals.	A	3.35	3.94	-2.99**
		S	4.37	4.84	-3.37***
21	Encourage patients to make informed decisions.	A	3.87	4.36	-2.81**
29	Encourage patients to practice skills.	A	4.02	4.55	-3.07**
33	Encourage adopting behaviors that will improve health.	A	3.74	4.22	-2.38*

Table 30 (continued)

	Teaching Activities		Low $\bar{X}$ (N=54)	High $\bar{X}$ (N=33)	t
Process Helper					
1	Establish a helping relationship.	A S	3.89 4.63	4.52 4.91	-4.08*** -2.83**
5	Validate learning needs with the patient.	S	4.58	4.84	-2.17*
9	Assist patients to identify learning needs.	A S	3.28 4.29	3.79 4.72	-2.80** -3.07**
10	Assist patients to formulate long- and short-term goals.	A S	2.98 4.29	3.52 4.74	-2.65** -2.81**
17	Ask patients their usual approach to solving problems.	A	2.57	3.24	-2.86**
18	Actively involve patients in determining acceptable solutions.	A	3.45	3.94	-2.71**
25	Relate new learning to patient's past experiences.	A	3.50	4.09	-2.82**
34	Assist patients in evaluating their progress.	A	3.38	3.84	-2.42*
38	Attempt to determine the reason(s) when learning has not occurred.	A S	3.77 4.65	4.45 4.86	-4.23*** -2.04*

Table 30 (continued)

Teaching Activities		Low $\bar{X}$ (N=54)	High $\bar{X}$ (N=33)	t
Solution Giver				
6 Am able to judge how much information a patient can "handle" or "needs to know."	A	3.85	4.15	-2.29*
8 Give appropriate professional advice.	A	4.07	4.36	-2.12*
	S	4.69	4.88	-1.99*
12 Suggest solutions that have worked for others.	A	3.74	4.36	-3.53***
	S	4.18	4.66	-2.70**
15 Give meaningful information.	A	4.04	4.52	-3.32***
	S	4.69	4.97	-3.56***
23 Patients and families rely on my information.	A	3.74	4.21	-2.97**
24 Share health care information at a level patients can understand.	A	4.19	4.61	-2.88**
28 Take initiative to correct inaccurate information.	A	4.17	4.64	-3.01**
	S	4.72	4.94	-2.59*
35 Identify alternative solutions.	A	3.67	4.13	-2.66**
37 Am not afraid to admit "I don't know."	S	4.80	4.97	-2.31*

Table 30 (continued)

	Teaching Activities		Low $\bar{X}$ (N=54)	High $\bar{X}$ (N=33)	t
Resource Linker					
26	Use various sources to obtain current knowledge.	A	3.59	4.00	-2.05*
27	Collaborate with other health professionals.	A	3.66	4.24	-2.80**
30	Encourage family participation.	A	3.64	4.33	-3.33***
31	Provide appropriate resources.	A	3.02	3.69	-2.81**
32	Help patients make personal application of information.	A	2.81	3.64	-3.73***
36	Identify appropriate community resources.	A	3.28	3.87	-2.57*
40	Refer patients to other helping professionals.	A	4.34	4.69	-2.55*

***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

indicated that they always included patient teaching in their nursing care perceived that they performed and/or should perform the teaching activities more frequently than did nurses who indicated that they included patient teaching less frequently.

Process helper. The results of the data analysis for items assigned to the role of process helper revealed eight statistically significant differences on the actual performance and five on the preferred performance of the teaching activities. The findings were similar to those described for the role of catalyst.

The lowest perceptions of actual performance were found for two teaching activities, item 10, *I assist patients to formulate long- and short-term goals appropriate to their learning needs*, and item 17, *I ask patients what their usual approach is to solving problems.*

Solution giver. The results of the data analysis for items assigned to the role of solution giver revealed eight statistically significant differences on the actual performance and five on the preferred performance of the teaching activities. The findings were similar to those for the roles of catalyst and process helper.

Resource linker. For items assigned to the role of resource linker, seven statistically significant differences were found on the actual frequency of performing teaching activities. Nurses who indicated that they always included patient teaching in their nursing care perceived that they performed teaching activities more frequently than did nurses who indicated that they included patient teaching less frequently.

Of the seven teaching activities indicating statistically significant differences, the lowest perception of actual performance was found for item 32, *I help patients make personal application of information when audiovisual or reading materials are used.* A high perception of actual performance was found for item 40, *I refer to other helping professionals those patients who require assistance with problems that fall within their area of expertise.*

The perceptions of how frequently nurses should perform the teaching activities for this role were not influenced by their perceptions of how regularly they included patient teaching in their nursing care.

Summary. The results of the data analysis revealed 28 statistically significant differences on the actual performance and twelve on the preferred performance of the teaching activities when the frequency of including patient teaching in nursing care was considered. For these teaching activities, nurses who indicated that they always included patient teaching in their nursing care perceived that they performed and/or should perform the teaching activities more frequently than did nurses who indicated that they included patient teaching less frequently. It would appear that the actual frequency of performing these teaching activities correlates with how regularly nurses included patient teaching in their nursing care. The perceptions of how frequently nurses should perform these teaching activities appeared to be influenced somewhat less by how regularly nurses included patient teaching.

Perception of Success in Patient Teaching

The mean response of nurses on the patient teaching factor, perception of success in patient teaching, was 3.81. For the purposes of these analyses, the nurses were grouped into two categories according to their perceived success in patient teaching (Table 31): one group included those who had a lower perception (2 or 3), while the second group included those who had a higher perception of success (4 or 5).

Catalyst. The results of the data analysis for items assigned to the role of catalyst revealed eight statistically significant differences on the actual frequency of performing the teaching activities. Nurses who perceived that they were highly successful in patient teaching indicated that they performed the teaching activities more frequently than did nurses who perceived they were less successful.

The lowest perception of actual performance was found for item 11, *I help patients focus their attention on accomplishing desired goals*. A high perception of actual performance was found for item 7, *I encourage patients to ask questions about their care and treatment*.

The perceptions of how frequently nurses should perform the teaching activities for this role were not influenced by their perceptions of success in patient teaching.

Table 31

Differences on Actual and Preferred Frequencies of Teaching Activities by Perception of Success in Patient Teaching

	Teaching Activities		Low $\bar{X}$ (N=23)	High $\bar{X}$ (N=65)	t
Catalyst					
2	Am able to judge the most opportune moment to teach.	A[1]	3.39	3.97	-2.49*
3	Stimulate patient's problem-solving ability.	A	3.43	3.94	-2.16*
4	Encourage patients to want to learn.	A	3.30	4.19	-3.70***
7	Encourage questions.	A	4.35	4.66	-2.13*
11	Help patients focus attention on accomplishing desired goals.	A	2.74	3.88	-5.33***
21	Encourage patients to make informed decisions.	A	3.55	4.23	-2.73*
29	Encourage patients to practice skills.	A	3.86	4.34	-2.43*
33	Encourage adopting behaviors that will improve health.	A	3.32	4.13	-3.81***

Table 31 (continued)

Teaching Activities		Low $\bar{X}$ (N=23)	High $\bar{X}$ (N=65)	t
Process Helper				
1 Establish a helping relationship.	A	3.52	4.34	-4.27***
5 Validate learning needs with the patient.	A	3.23	3.98	-3.57***
9 Assist patients to identify learning needs.	A	2.83	3.70	-4.27***
	S	4.05	4.60	-2.46*
10 Assist patients to formulate long- and short-term goals.	A	2.43	3.46	-5.10***
	S	3.95	4.64	-2.54*
16 Consider the patient's readiness to learn before teaching.	A	3.61	4.16	-3.00**
	S	4.50	4.89	-2.19*
17 Ask patients their usual approach to solving problems.	A	2.13	3.08	-3.80***
	S	3.73	4.40	-3.15**
18 Actively involve patients in determining acceptable solutions.	A	3.18	3.79	-3.13**
25 Relate new learning to patient's past experiences.	A	3.09	3.94	-3.10**
38 Attempt to determine the reason(s) when learning has not occurred.	A	3.48	4.21	-4.06***
	S	4.55	4.79	-2.15*

Table 31 (continued)

	Teaching Activities		Low $\bar{X}$ (N=23)	High $\bar{X}$ (N=65)	t
Solution Giver					
6	Am able to judge how much information a patient can "handle" or "needs to know."	A	3.68	4.06	-2.42*
8	Give appropriate professional advice.	A	3.91	4.28	-2.43*
12	Suggest solutions that have worked for others.	A	3.59	4.11	-2.53*
14	Give patients health care information.	A	3.52	3.98	-2.25*
15	Give meaningful information.	A	3.91	4.33	-2.16*
28	Take initiative to correct inaccurate information.	A	4.05	4.45	-2.22*
35	Identify alternative solutions.	A S	3.45 4.43	3.97 4.71	-2.68** -2.37*
37	Am not afraid to admit "I don't know."	A	4.38	4.73	-2.54*

Table 31 (continued)

Teaching Activities		Low $\bar{X}$ (N=23)	High $\bar{X}$ (N=65)	t
Resource Linker				
13 Suggest a variety of educational resource materials.	A S	2.83 4.09	3.48 4.52	-2.72** -2.14*
20 Discuss resources within family/significant others.	A	3.27	3.86	-2.43*
22 Assist patients to identify support systems.	A	3.32	3.82	-2.10*
26 Use various sources to obtain current knowledge.	A	3.27	3.91	-2.93**
27 Collaborate with other health professionals.	A	3.43	4.03	-2.54*
30 Encourage family participation.	A	3.18	4.16	-4.39***
31 Provide appropriate resources.	A	2.57	3.50	-3.56***
32 Help patients make personal application of information.	A	2.43	3.35	-3.69***
36 Identify appropriate community resources.	A	3.10	3.63	-2.10*

$^{***}p \leq 0.001$; $^{**}p \leq 0.01$; $^{*}p \leq 0.05$

[1] A represents actual performance; S represents preferred performance

Process helper. The results of the data analysis for items assigned to the role of process helper revealed nine statistically significant differences on the actual performance and five on the preferred performance of the teaching activities. For these teaching activities, nurses who perceived that they were highly successful in patient teaching indicated that they performed and/or should perform the teaching activities more frequently than did nurses who perceived that they were less succcessful. On the actual performance, nurses who perceived that they were highly successul in patient teaching indicated that they performed the nine teaching activities between some of the time and always, while nurses who perceived they were less successful indicated that they performed the teaching activities between infrequently and most of the time.

The lowest perceptions were found on both the actual and the preferred performance for item 17, *I ask patients what their usual approach is to solving problems*. Low perceptions of actual performance were also found for item 9, *I assist patients to identify learning needs*, and item 10, *I assist patients to formulate long- and short-term goals*. High perceptions of actual performance were reported for the teaching activities, *I establish a helping relationship*, *I consider the patient's readiness to learn before teaching*, and *I attempt to determine the reason(s) when learning has not occurred*.

Solution giver. The results of the data analysis for items assigned to the role of solution giver revealed eight statistically significant differences on the actual performance of the teaching activities. Similarly as on the findings for the role of process helper, nurses who perceived that they were highly successful in patient teaching indicated that they performed and/or should perform the teaching activities more frequently than did nurses who perceived that they were less successful.

Resource linker. The results of the data analysis for items assigned to the role of resource linker revealed nine statistically significant differences on the actual performance and one on the preferred performance of the teaching activities. The findings were similar to those for the roles of process helper and solution giver.

The nurses reported a low frequency of performing the following teaching activities: *I help patients make personal application of information; I provide appropriate resources;* and *I suggest a variety of educational resource materials.* The greatest difference in the mean responses of nurses was noted for item 30, *I encourage family participation in the teaching plan.*

Summary. The results of the data analysis revealed 34 statistically significant differences on the actual performance and seven on the preferred performance of the teaching activities in relation to their own perception of success as a patient teacher. For these teaching activities, nurses who perceived that they were highly successful in patient teaching indicated that they performed and/or should perform the teaching activities more frequently than did nurses who perceived that they were less successful. The actual frequency of nurses performing the teaching activities correlated with their perceptions of success in patient teaching. The perceptions of how frequently nurses should perform the teaching activities, however, was influenced less by the nurses' perceptions of success in patient teaching.

Comments on Increasing Patient Teaching Effectiveness

The respondents were asked to comment on any factors that they felt were important in increasing patient teaching effectiveness. Forty-nine nurses (55.7%) offered comments. Several nurses expressed their appreciation for this opportunity.

A content analysis of all responses was performed, and the nurses' comments were grouped into four general categories:

1. Teacher-facilitator factors
2. Educational process
3. Educational methods
4. Support for patient teaching

A summary of the findings in terms of frequency of the responses is presented in Table 32. Excerpts of comments are also included.

Table 32

Frequency Distribution of Respondents' Comments on Increasing Patient Teaching Effectiveness

Category / Respondents Comments	Frequency
Teacher-Facilitator Factors	
Must feel confident in knowledge base	5
A commitment to patient teaching	2
Ability to judge how much is to be taught	2
Confident with nursing skills	1
Remain current	1
Know where to get answers	1
Knowledge of illness, prognosis	1
Own capabilities and prejudices towards a specific illness	1
Ability to cope with specific situations	1
Learn to coordinate "specialists" with floor nurse	1
Maybe better organization of nurse	1
Barrier: Lack of interest in present area of work	1
(Supervisor) Do not consciously think of my role as patient teacher	1
	19
Educational Process	
Assessment of Patient	
Ability to understand	6
Level of readiness/motivation	4
Past experiences	3
Knowledge	2
Age	2
Patient's needs	2
Language	1
Emotional state; amount of pain experienced	1
Education; cultural and socioeconomic background	1
Learning ability	1
Ability to cope	1
What care will be available in the home	1
Communicate and listen to patient to have an accurate perception of where patient is at and how feeling prior to giving information	1

Table 32 (continued)

Category / Respondents Comments	**Frequency**
Educational Process (continued)	
Goal Setting	
Realistic goals	1
Mutually agreed by patient and teacher; measurable	1
Intervention	
Time / decrease patient load	21
Patient teaching should be an ongoing process, not attempted only right before discharge	4
Communicate at level patient and/or family can comprehend	4
Develop rapport with patient and family	3
Consistent teaching plan	3
Start teaching patient as soon as admitted to ward/ from first day illness is diagnosed	2
Include patient and family in plan of care	2
Team approach	2
Continuity of care by same nurse	2
Encourage questions	2
Reinforce as necessary	2
Follow-up	2
Very few resources are available (handouts, audiovisuals, etc.) to assist in patient teaching	2
Better communication	1
Environment conducive to learning--quiet, free from pain or anxiety	1
Give facts about the illness and treatments available	1
Patient teaching literature translated in various languages, availability of translators and family members	1
Build on patient's knowledge from past experiences	1
Instructions given slowly over a period of time	1
Give encouragement	1
Have a set procedure to teach to patients	1
Specific directions should be written down	1
Take the time to do it right	1
Evaluation	
Whether teaching has been effective or not	2
Feedback	1
	92

Table 32 (Continued)

Category / Respondents Comments	Frequency
Educational Methods	
Small group teaching	2
One-to-one	1
Combination of group and one-to-one teaching	1
Free television service per patient room. Reserve one channel for scheduled patient teaching	1
	5
Support for Patient Teaching	
Inservice education	5
(and time to attend)	1
Adequate staffing is of utmost importance	2
More encouragement and motivation to participate	2
(Supervisor) Often involved in assisting others to teach	1
Often see patient teaching delegated to "specialists"	1
Teach nurses when they are students the importance	1
	13

Many suggestions were made for increasing patient teaching effectiveness, although in most instances the frequency of the responses was low. The largest number of comments concerned the educational process; the fewest number offered concerned educational methods.

Teacher-Facilitator Factors

The comment in this category that was made most frequently related to the importance of a good knowledge base. Five respondents shared the point of view similar to the following comment: "Be sure of your knowledge to inspire confidence in your 'subjects' (client)." Varying comments relating to teacher-facilitator factors were expressed, however, the following statements also concerned professional knowledge:

> Keep yourself open to new knowledge and change your teaching and remain current.
>
> You better know what you're talking about or where to get the answers if you don't.
>
> In order for nurses to do effective patient teaching they must feel confident in their knowledge base and their nursing skills. I feel patient teaching is an advanced skill which can never be perfected as we can always find methods to improve our teaching.
>
> You need knowledge of illness, corrective procedures done, doctor's preference in treatment, prognosis, level patient is at currently, expected realistic goal for patient.

To increase patient teaching effectiveness, two nurses indicated the importance of "nurse commitment to patient teaching." Several staff nurses offered their perceptions concerning the importance of patient teaching and their acceptance of the teacher-facilitator role.

> An area that is very important and sorely lacking.
>
> Teaching is a rewarding and enjoyable part of my job, but I find that other patient needs often take priority, leaving only the basic elements of patient teaching covered. I am a strong advocate of patient awareness and believe that patient teaching is an essential part of the nursing role.
>
> Patient teaching is as important as any other element of nursing, but in some cases having the patient totally aware of his condition, progress and prognosis can be counter-productive.

A supervisor shared her perspective on patient teaching:

> There are times I do patient teaching but don't acknowledge it as such. If I did, I would probably do a better job. Often I fail to establish the patient's present knowledge and therefore, either talk over or under the patient's level of

> understanding. I do not consciously, on a daily basis, think of my role as patient teacher.

Educational Process

A variety of opinions were presented concerning the educational process. Excerpts of the respondents' comments were organized within the steps of the teaching process: assessment, goal setting, intervention and evaluation.

The single most frequent response by nurses related to time availability and workload. Twenty-one respondents (42.9%) from medicine, surgery, and obstetrics identified time availability and/or workload as a barrier to effective implementation of patient teaching. The nurses on rehabilitation, however, made no reference to this. The comments that were made suggest that insufficient time and workload may offer a partial explanation for the differences found between the actual and the preferred performance of nurses on the teaching activities. A sample of the comments are provided:

> I believe the biggest factor affecting patient teaching is time. Due to ? shortage of staff and heavy patient assignments, patient teaching often has to be cut back offering minimal learning only. Time affects how much we can learn of a patient's past experiences, his ability to cope, his readiness to learn and our assessment of just how much he understands.
>
> Quite often, during the day, my patients are either busy with doctors or away at a test. On the other hand, I'm too busy trying to meet and complete my patients' physical needs. Therefore, I feel, not enough time is available to properly teach a patient.
>
> The floor nurse also finds her time is being occupied by more and more technical things, with less time left for talking to the patient, and for teaching.
>
> In order to be effective, teaching can't be rushed.
>
> Often, when the best time for them to learn arises, I really don't have the time, therefore, sometimes teaching occurs at times when patients are not ready.
>
> Decrease the load of patients making time for good teaching not just giving information.

A supervisor commented:

> In the position I hold there is regretably very little time for any patient teaching role. All such efforts are directed towards other patient teaching sources available or delegated to other staff.

To increase patient teaching effectiveness, six nurses suggested assessing the patient's ability to understand. Four respondents further suggested that nurses should communicate at a level the patient and/or family can understand. The following perception was offered:

> I think that sometimes nurses try to teach patients by using too technical language. I think that patients sometimes only say they understand in order not to feel "dumb" to us. I think we should learn to assess patients' ability to understand our teaching and to teach them at that level.

Four nurses suggested that the patient's level of readiness/motivation be assessed and that "patient teaching should be an ongoing process and should not be attempted only right before discharge." Two other nurses perceived that "it is important to start teaching the patient as soon as he is admitted to the ward" or "from the first day an illness is diagnosed." A patient teacher shared the following experiential perceptions and suggestions for increasing patient teaching effectiveness:

> I feel that early participation increases effectiveness, as well as a team approach. Even though in my particular area I am responsible for the teaching, if other hospital personnel participate in the care it helps the patient to realize the importance of the teaching and it encourages a positive attitude. Unfortunately in the hospital setting the state of "ready to learn" may too often come close to the discharge time. This creates a problem because even though the physician is willing to keep the patient in longer, the patient does not wish to stay and learn to manage his care over the extended time. He wants a "rush" job.

Three nurses indicated that "having a consistent teaching plan so that patients are given the same information by different nursing staff, saves confusing the patient." Two nurses shared the following perceptions:

> Continuity of care by the same nurses is very important to teach effectively and to evaluate the effect of teaching.

Educational Methods

The five respondents who commented on educational methods suggested one-to-one, small group teaching, a combination of group and one-to-one teaching, and free television service per patient room with one channel reserved for scheduled patient teaching. The two nurses who suggested small group teaching both worked on obstetrics. One explanation in support of small group teaching was:

> I find that small groups (eg., 2-3 patients) are effective in teaching. As teaching

> more than one person at a time can "save" a nurse time, more time is available to teach the information. Also, listening to others' questions/comments may stimulate a patient to think of, and express, other valid concerns that the nurse may not have thought to bring up herself.

Support for Patient Teaching

There were varying comments concerning support for patient teaching. Five nurses suggested inservice education to improve patient teaching effectiveness.

> Nurses must continue to read about how to teach patients and participate in inservice conferences on patient assessment and teaching.
>
> More inservice (and time to attend).
>
> Continued learning through inservice, courses, seminars, other professionals (nurses, doctors, physio, pharmacists, etc.).

Two nurses indicated that "adequate staffing is of utmost importance" and "nurses should be given more encouragement and motivation to participate in patient teaching." One unit supervisor indicated that her teaching is "sporadic and (she is) often involved in assisting others to teach." One nurse suggested to nurse educators:

> Teaching nurses when they are still students as to the importance of educating patients and encouraging patients to take responsibility for the health care. If nurses miss this as students, they never internalize the importance of it.

Summary

In this chapter, the findings from the questionnaire responses were reported and discussed. Frequency and percentage distributions were presented to describe the personal and professional characteristics of the 88 registered nurses participating in the study.

Five specific research questions were examined. For the first research question, the t-test procedure was used to identify statistical differences between the perceptions of the actual and the preferred predetermined change agent roles of nurses as catalyst, process helper, solution giver, and resource linker. The findings revealed that the nurses' perceptions of their actual performance for each of the teaching activities as grouped within these roles, were lower than the level they preferred.

For the second research question, the responses of nurses to the actual and preferred frequencies of performing the teaching activities were analyzed by using the t-test procedure and one-way analysis of variance to determine statistically significant mean differences by selected personal and professional characteristics. When the means of more than two groups were being compared, the Scheffé method of multiple comparison was used to identify between which groups the differences existed. Statistically significant differences in perceptions were identified in relation to the personal and professional characteristics that were examined.

The frequency and percentage distributions, and the mean responses were presented to describe the differences in the perceptions of registered nurses to such factors as self-perceived competence, importance and success in patient teaching. For all factors, the respondents' ratings were fairly high.

The responses of nurses to such factors as self-perceived competence, importance and success in patient teaching were examined by selected personal and professional characteristics. The categories for the personal and professional characteristics and the statistical procedures used in the data analysis were similar to those applied in the second research question. Statistically significant mean differences were found in the perceptions of nurses on the patient teaching factor(s) when considered on the basis of: age; baccalaureate degree or diploma as the highest level of nursing education; teaching/learning theory, problem-solving process, and change theory in educational programs; present area of nursing practice; length of experience in present area; and patient teaching experience. No statistically significant mean differences existed when considered on the basis of post-basic or basic baccalaureate nursing education, year completed highest level of nursing education, interpersonal communication skills and nursing process in educational programs, years of experience as a registered nurse, present position, and length of experience in present position.

The responses of nurses to the actual and preferred frequencies of performing the teaching activities were examined by such factors as self-perceived competence, importance and success in patient teaching. The data were analyzed by using the t-test procedure to determine statistically significant differences between the means of nurses with higher and lower perceptions of these factors. The findings revealed that nurses who had a higher perception of factors such as self-perceived competence, importance and success in patient teaching indicated that they performed and/or should perform all teaching activities more frequently than did nurses who had a lower perception. The perceptions of how frequently nurses should perform the teaching activities, however, appeared to be influenced less by the nurses' perceptions of the patient teaching factors than was their actual performance.

The respondents' comments on factors that they felt were important in increasing patient teaching effectiveness were classified and summarized. A sample of the coments was presented and discussed.

Chapter 5

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This final chapter is divided into three sections. The first section provides a summarization of the study, including its purpose, the research questions, the research design and methodology, and the findings from the data analysis. In the second section, the conclusions derived from the findings are presented. The final section focuses on the implications of the study for nursing in the following areas: practice, education, and further research.

Summary

Purpose

The purpose of this study was to determine the actual and the preferred roles of registered nurses as change agents in patient education.

The following specific research questions were addressed:

1. What are the differences in the perceptions between the actual and preferred change agent roles of registered nurses as catalyst, process helper, solution giver and resource linker?
2. To what extent are the perceptions of the change agent roles related to such personal and professional characteristics of nurses as age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience?
3. What are the differences in the perceptions of registered nurses to such patient teaching factors as self-perceived competence, importance and success in patient teaching?
4. To what extent are the perceptions of patient teaching factors related to such personal and professional characteristics of nurses as age, educational level, content of basic

program, nursing experience, present position, present area of nursing practice, and patient teaching experience?

5. To what extent are the perceptions of the change agent roles related to such factors as self-perceived competence, importance and success in patient teaching?

Research Design and Methodology

The study was a descriptive survey. A questionnaire developed by the researcher for this study was used to collect data relating to: (1) the personal and professional characteristics of the respondents; (2) how frequently nurses perceived they actually did and should perform the forty teaching activities relating to the four roles of catalyst, process helper, solution giver and resource linker; and (3) the perceptions of nurses to the patient teaching factors.

A panel of six experts critically reviewed the items relating to the roles of catalyst, process helper, solution giver, and resource linker. The revised instrument was pilot tested before it was distributed to 175 full-time registered nurses who were functioning as unit supervisors, assistant unit supervisors, general staff nurses, and patient teachers on selected medical, surgical, obstetrical, and rehabilitation units at a major hospital in urban Alberta. A type of nonprobability sampling was used to select three medical, three surgical, two obstetrical, and three rehabilitation units from the total population. A total of 88 useable questionnaires were returned for a return rate of 50.3 percent.

The forty teaching activity statements used in this study were tested for construct validity using factor analysis. The results of the factor analysis did not support the use of Havelock's four roles. Consequently, all statistical analyses were on an item basis, not by combined scores within role categories. Nevertheless, the items describing the teaching activities of nurses were grouped according to the four predetermined roles of a change agent, and descriptive and analytical statistical procedures were used to address the research questions of the study.

Findings

The findings of the study are summarized according to the five research questions investigated in this study.

Differences between the actual and preferred teaching activities. The first research question examined the differences between the perceptions of the actual and the preferred predetermined change agent roles of registered nurses as catalyst, process helper, solution giver and resource linker. The findings of the t-test procedure revealed that the nurses' perceptions of their actual performance of all teaching activities designated within these roles were less frequent than preferred. Figures 2 to 5 depict these distributions for items within each predetermined change agent role. Generally, the differences were highest between the actual and the preferred performance of the teaching activities described within items representing the role of process helper. The lowest differences were found for the teaching activities described within the items representing the role of solution giver.

The nurses indicated that their actual performance of one-third of the teaching activities was between "most of the time" and "always," and approximately two-thirds of the teaching activities were performed between "some of the time" and "most of the time." With one exception, the teaching activities relating to the role of resource linker were reported to be performed between "some of the time" and "most of the time."

Both the actual and the preferred performance ratings were found to be lowest for the teaching activity item, ***I ask patients what their usual approach is to solving problems.*** The mean responses indicated that nurses asked patients their usual approach to solving problems less frequently than "some of the time," while they perceived they should do so between "most of the time" and "always."

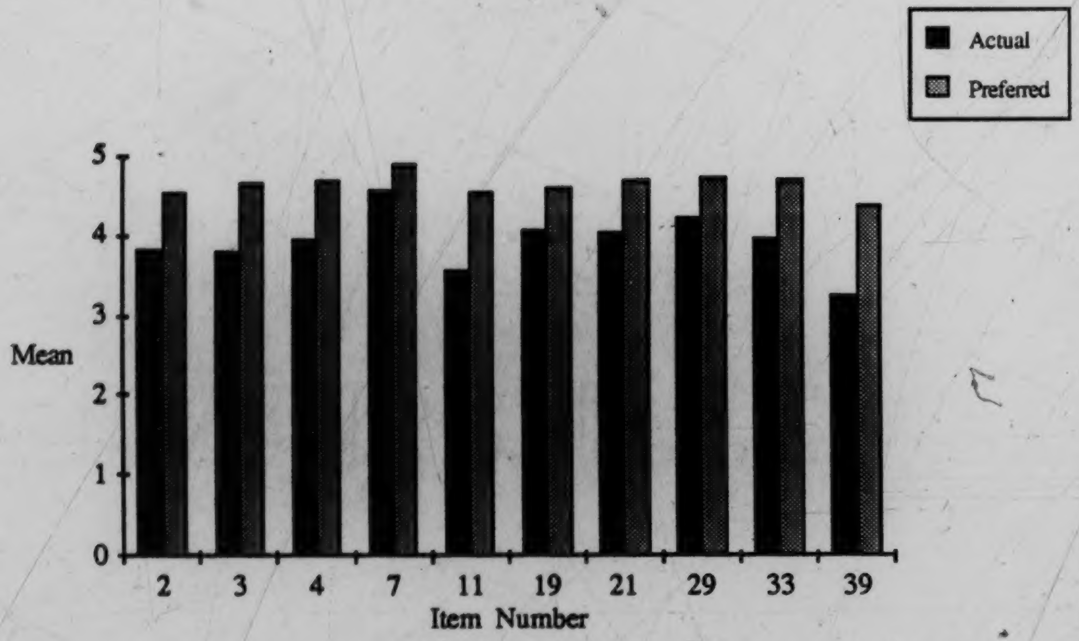

Figure 2

A Comparison of Actual and Preferred Frequencies of Teaching Activities in the Predetermined Role of Catalyst

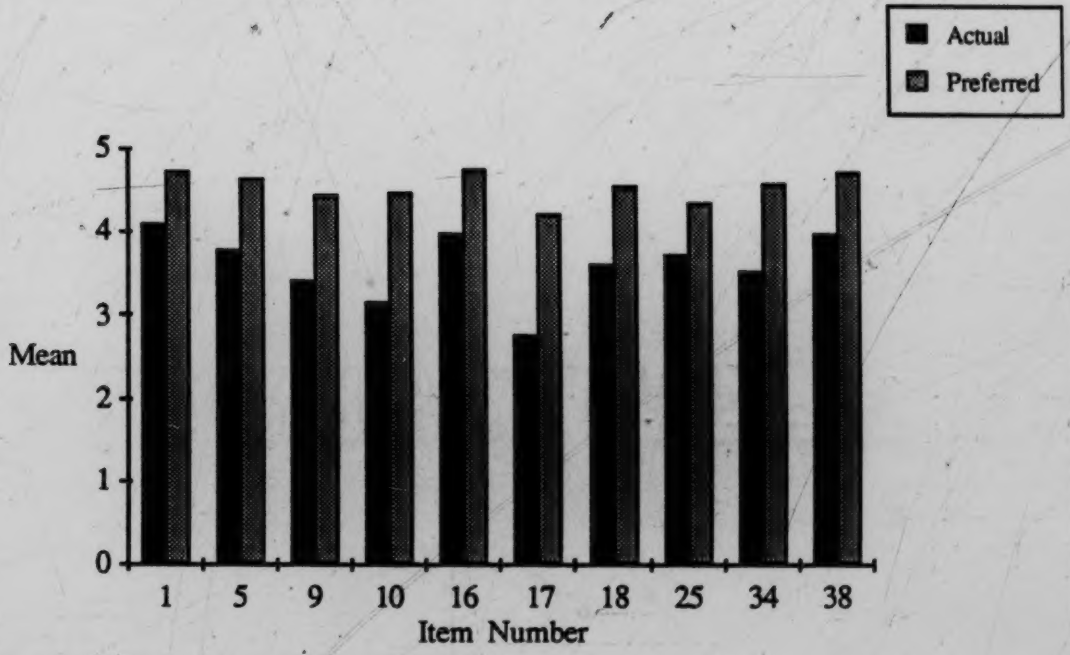

Figure 3

A Comparison of Actual and Preferred Frequencies of Teaching Activities in the Predetermined Role of Process Helper

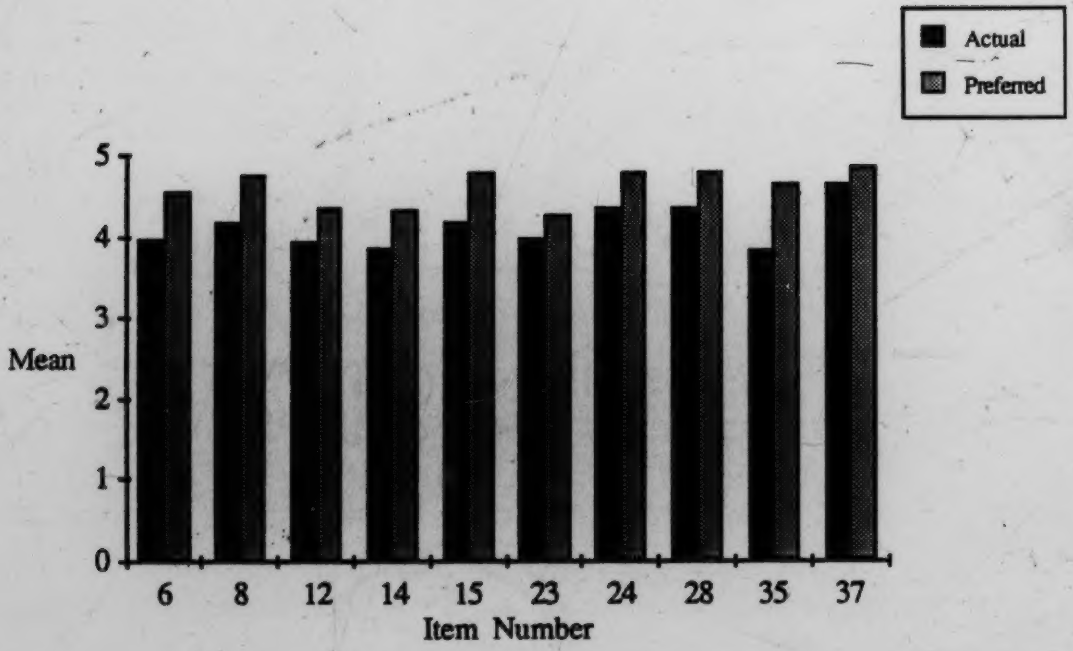

Figure 4

A Comparison of Actual and Preferred Frequencies of Teaching Activities in the Predetermined Role of Solution Giver

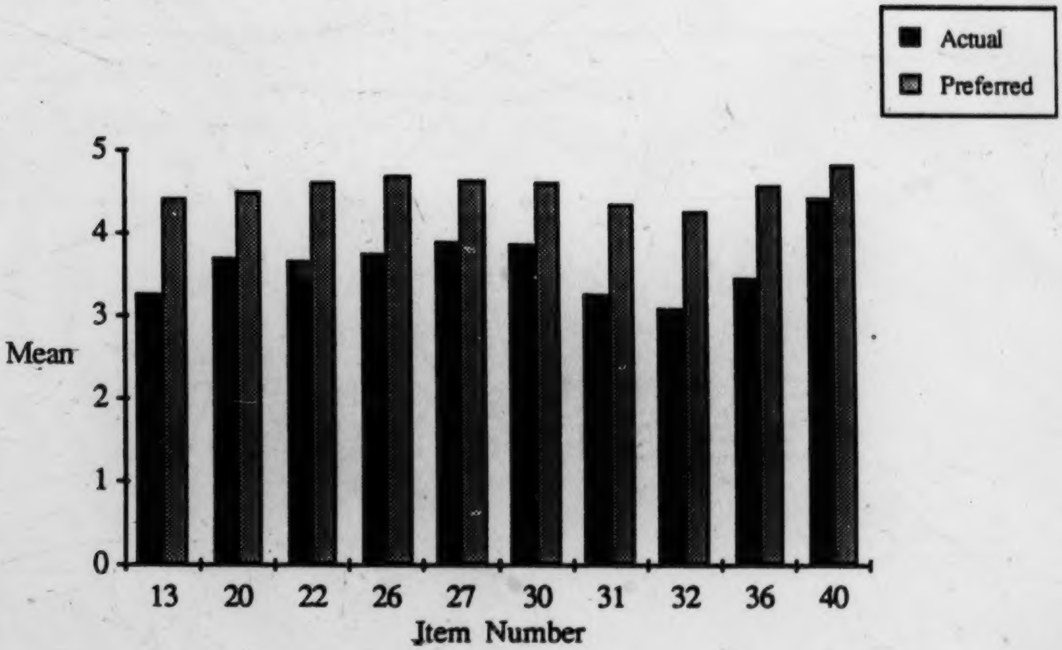

Figure 5

A Comparison of Actual and Preferred Frequencies of Teaching Activities in the Predetermined Role of Resource Linker

Differences in the perceptions of the change agent roles related to personal and professional characteristics. The second research question examined the responses of nurses to the actual and preferred frequencies of performing the teaching activities related to the predetermined roles of catalyst, process helper, solution giver, and resource linker by selected personal and professional characteristics. The results of the data analysis revealed that each of the personal and professional characteristics of nurses examined was associated with at least one statistically significant mean difference on the actual or the preferred frequency of performing the teaching activities. A total of 69 (10.8 percent) statistically significant differences existed on the actual frequency of performing the teaching activities, and 39 (6.0 percent) statistically significant differences existed on the preferred frequency of performing the teaching activities. Of the 69 statistically significant differences on the actual frequency of performing the teaching activities, 33 were found within the items designated as the role of resource linker. A summary of the probabilities of statistically significant differences on the actual and preferred frequencies of performing the teaching activities according to age, educational level, content of basic program, nursing experience, present position, present area of nursing practice, and patient teaching experience are presented in Table 33. Only variables that indicated statistically significant mean differences on four or more of 40 teaching activities will be discussed.

For the variable age, five items indicated statistically significant mean differences on the actual frequency of performing the teaching activities. Nurses 30-34 years of age perceived that they established a helping relationship with patients more frequently than did nurses 45 years and older. Nurses under 45 years of age perceived that patients and families relied on their information more frequently than did nurses 45 years and older. For three items designated as resource linker activities, nurses 30 years and older perceived that they used various sources to obtain current knowledge to plan and implement their teaching more frequently than did nurses under 30 years of age. Nurses 30-44 years of age perceived that they provided appropriate resources and helped patients make personal application of information more frequently than did nurses under 30 years of age. Of the twelve items that

Table 33

Summary of Probabilities of Significant Differences on Actual and Preferred Frequencies of Performing Teaching Activities by Personal and Professional Characteristics of Nurses

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Catalyst																	
2 Am able to judge the most opportune moment to teach.	A[1]			043							031				006		
	S	011		025					001	023					000		
3 Stimulate patient's problem-solving ability.	S	007								026			038				
4 Encourage patients to want to learn.	S	009								036							
7 Encourage questions.	A									022							
11 Help patients focus attention on accomplishing desired goals.	A							047									
	S	016								003							
19 Explain importance of adhering to the care planned.	A				041												

Table 33 (continued)

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Catalyst (continued)																	
21 Encourage patients to make informed decisions.	A										022		049				
	S	009			038							028					043
29 Encourage patients to practice skills.	A														036		
	S	014											014				
33 Encourage adopting behaviors that will improve health.	A										019						
39 Provide written instructions to increase commitment.	A						022		029								042
	S								021								
Process Helper																	
1 Establish a helping relationship.	A	034													002		
	S	002											020		001		
5 Validate learning needs with the patient.	A				027												
	S														011		

Table 33 (continued)

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Process Helper (continued)																	
9 Assist patients to identify learning needs.	A									025		020					012
	S									011							
10 Assist patients to formulate long- and short-term goals.	S									015				030			
16 Consider the patient's readiness to learn before teaching.	S														019		
17 Ask patients their usual approach to solving problems.	A				019												
18 Actively involve patients in determining acceptable solutions.	A				001							020					
25 Relate new learning to patient's past experiences.	S									026							

Table 33 (continued)

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Solution Giver																	
6 Am able to judge how much information a patient can "handle" or "needs to know."	A														030		
8 Give appropriate professional advice.	S	020															
14 Give patients health care information.	A				004									001		015	046
15 Give meaningful information.	A				003										050		
	S	048											050				
23 Patients and families rely on my information.	A	001												003	001		
	S																039
24 Share health care information at a level patients can understand.	A										037						
	S	043															
35 Identify alternative solutions.	A				018										034		
37 Am not afraid to admit "I don't know."	A		030														
	S	020															

Table 33 (continued)

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Resource Linker																	
13 Suggest a variety of educational resource materials.	A													038			010
20 Discuss resources within family and/or significant others.	A											028	018			008	008
	S								022	004							
22 Assist patients to identify support systems.	A				016			014					004			046	041
	S	050															
26 Use various sources to obtain current knowledge.	A	006			007							001					009
27 Collaborate with other health professionals.	A				001							022					022
30 Encourage family participation.	A			016								029					039
	S										049						
31 Provide appropriate resources.	A	000			005						036	002			014		003

Table 33 (continued)

Teaching Activities		Age	BN or Dip.	BN	Yr. Dip.	Yr. BN	IPR	TL	PS	NP	CT	Yrs. RN	Staff or Sup.	Yrs. Staff, Sup.	Pres. Prac. Area	Yrs. in Area	Yrs. of PT.
Resource Linker (continued)																	
32 Help patients make personal application of information.	A	029			003							024					012
	S					040											
36 Identify appropriate community resources.	A														038		
40 Refer patients to other helping professionals.	A				009												

Explanation of heading abbreviations used: **BN or Dip.** - BN or Diploma as highest level of nursing education; **BN** - Basic or Post-Basic Baccalaureate Nursing Education; **Yr. Dip.** - Year Diploma received; **Yr. BN** - Year BN received; **IPR** - Interpersonal communication skills; **TL** - Teaching/learning theory; **PS** - Problem-solving process; **NP** - Nursing process; **CT** - Change theory; **Yrs. RN** - Years worked as a Registered Nurse; **Staff or Sup.** - Present position of staff or supervisor; **Yrs. Staff, Sup.** - Years in present position; **Pres. Prac. Area** - Present area of nursing practice; **Yrs. in Area** - Years in present area; **Yrs. of PT** - Years of patient teaching experience.

[1] A represents actual performance; S represents preferred performance

indicated statistically significant mean differences on the preferred frequency of performing the teaching activities, six were within the items assigned to the role of catalyst and four were within the items assigned to the role of solution giver. Nurses under 30 years of age and those between 30-44 years (except in two instances) perceived that they should perform the twelve teaching activities more frequently than did nurses 45 years and older.

For the variable, the year nurses graduated with a Diploma in Nursing as their highest level of nursing education, thirteen items showed statistically significant mean differences on the actual frequency of performing the teaching activities. For each of these items, nurses who graduated between 1966-75 perceived that they performed the teaching activities more frequently than did the nurses who graduated between 1976-84. Also, nurses who graduated between 1966-75 perceived that they actively involved patients in determining acceptable solutions, and gave patients health care information more frequently than did the nurses who graduated between 1948-65. In addition, nurses who graduated between 1948-65 perceived that they performed five of the teaching activities within the preassigned role of resource linker more frequently than did the nurses who graduated between 1976-84. The year the nurses graduated with a Diploma in Nursing appeared to have the most influence on the nurses actual performance on items designated as resource linker activities. The year the nurses graduated with a Diploma in Nursing did not appear to influence their perceptions of how frequently they should perform the teaching activities.

For the content area, nursing process, the statistically significant mean differences found on two actual and eight preferred performance dimensions revealed that the nurses who indicated that the nursing process was included in their education consistently perceived that they performed and/or should perform the teaching activities less frequently than did nurses who did not indicate the content was included. In contrast, for the content area, change theory, the statistically significant mean differences on five actual and one preferred performance dimension revealed that nurses who indicated that change theory was included in their education perceived that their actual and preferred performance of the teaching activities were consistently more frequent than did nurses who did not indicate the content was included.

For the variable, number of years of experience as a registered nurse, eight items indicated statistically significant mean differences on the actual frequency of performing the teaching activities. Generally, nurses with less than six years of experience as a registered nurse perceived that they performed the teaching activities less frequently than did the nurses with more experience. The number of years of experience as a registered nurse did not appear to influence the nurses' perceptions of how frequently they should perform the teaching activities.

For the variable, present position, the supervisors' perceptions of how frequently they actually performed the three teaching activities that indicated statistically significant mean differences, were significantly higher than those of staff nurses. In contrast, for the four teaching activities that indicated statistically significant mean differences on the preferred performance, the staff nurses' perceptions of how frequently they should perform the teaching activities were significantly higher than the perceptions of supervisors. Mauksch and Miller (1981: 5) may provide a partial explanation for the variation in the preferred performance:

> On the system level, head nurses (supervisors) . . . direct most of the energy at changing the behavior of their staff to maximize patient care. Staff nurses, on the other hand, are expected to direct their efforts as change agents toward their patients. Their role requires that they work to change people's behaviors, attitudes, and values toward health. They also try to educate people about self-care procedures, signs of illness, and the like.

There were statistically significant differences on the actual performance of nine teaching activities and the preferred performance of four teaching activities for the variable, present area of nursing practice. The perceptions of the actual and the preferred performance of nurses on obstetrics and the preferred performance of nurses on surgery differed most frequently from the perceived actual and preferred performance of nurses on medicine and rehabilitation.

For the variable, patient teaching experience, statistically significant mean differences existed on the actual performance of eleven teaching activities and the preferred performance of two teaching activities. Nurses who reported that they included patient teaching in their nursing care for less than six years perceived that they performed the teaching activities less frequently than did nurses who had more experience. Similar to the findings for the variable, length of experience as a registered nurse, the number of years nurses included patient teaching in their nursing care appeared to influence their actual frequency of performing the teaching activities within the preassigned role of resource linker. Eight of the eleven statistically significant teaching activities on the actual performance were found within the preassigned role of resource linker. The integration of teaching activities into daily nursing practice is likely easier as the nurse feels more confident and knowledgeable.

In general, the following variables were not highly influential in the nurses' perceptions of their actual or preferred frequency of performing the teaching activities: baccalaureate degree or diploma as the highest level of nursing education; post-basic or basic baccalaureate nursing education; year completed baccalaureate degree; interpersonal communication skills, teaching/learning theory, and problem-solving process in educational programs; length of experience in present position; and length of experience in present area.

The results of the data analysis revealed that the personal and professional characteristics studied did not appear to influence the nurses' perceptions of their actual or preferred frequency of performing four teaching activities. The four teaching activities were: assist patients in evaluating their progress; attempt to determine the reason(s) when learning has not occurred; suggest solutions that have worked for others; and take the initiative to correct inaccurate information.

Differences in perceptions of patient teaching factors. The third research question examined the differences in the perceptions of registered nurses on such factors as self-perceived competence, importance and success in patient teaching. Generally, nurses' ratings of these factors were high. The two highest mean responses indicated that nurses perceived that patient teaching was very important, and that they included it in their nursing care most of the time. The nurses' perceptions of the importance that other professionals (physicians, nursing administrators, other nurses) give to nurses' teaching patients and families were somewhat lower than the nurses' own perceptions of the importance of patient teaching. As a group, nurses perceived that they were moderately to very successful in patient teaching. The two lowest mean responses related to self-perceived competence. The mean responses indicated that the nurses perceived that their nursing education preparation for patient teaching was moderately effective, and they were moderately to very satisfied with their current qualifications for their patient teaching role.

Differences in perceptions of patient teaching factors related to personal and professional characteristics. The fourth research question examined to what extent the perceptions of the patient teaching factors were related to selected personal and professional characteristics of nurses. As indicated in Table 34, twelve statistically significant mean differences were found in the perceptions of nurses on the patient teaching factor(s) when considered on the basis of: age; baccalaureate degree or diploma as the highest level of nursing education; teaching/learning theory, problem-solving process, and change theory in educational programs; present area of nursing practice; length of experience in present area; and patient teaching experience. No statistically significant mean differences existed when considered on the basis of post-basic or basic baccalaureate nursing education, year completed highest level of nursing education, interpersonal communication skills and nursing process in educational programs, years of experience as a registered nurse, present position, and length of experience in present position.

For the first patient teaching factor, the results of the data analysis revealed that baccalaureate degree nurses perceived that their nursing education programs were more effective in preparing them for patient teaching than did diploma nurses. Nurses who indicated that the content areas, teaching/learning theory, problem-solving process and change theory were included in their education, perceived that their nursing education program prepared them more effectively for patient teaching than did nurses who did not indicate that the content was included.

Nurses between 30-44 years of age, who had more than six years of experience in their present area of nursing practice, and who included patient teaching in their nursing care for more than ten years, perceived a greater degree of satisfaction with their current qualifications

Table 34

Summary of Probabilities of Significant Differences on Patient Teaching Factors by Personal and Professional Characteristics of Nurses

Patient Teaching Factors	Age	BN vs Diploma	Teaching/ Learning Theory	Problem-Solving Process	Change Theory	Present Area	Years in Present Area	Years of Patient Teaching
Effectiveness of nursing education preparation for patient teaching		017	003	018	001			
Satisfaction with current qualifications for patient teaching role	019						021	015
Importance of patient teaching as compared to other nursing activities						009		
Importance of nurses teaching patients as perceived by other professionals	028						024	
Frequency of including patient teaching in nursing care						002		
Perception of success in patient teaching	035							

for their patient teaching role than did nurses under 30 years of age, with less than six years of experience, and who included patient teaching for less than six years.

Nurses on obstetrics perceived the importance of patient teaching as compared to other nursing activities to be greater than did nurses on surgery and rehabilitation. Nurses between 30-44 years of age, and those who had more than ten years of experience in their present area of nursing practice perceived that other professionals (physicians, nursing administrators, other nurses) viewed nurses teaching patients and families to be of greater importance than did nurses under 30 years of age and those who had less than six years of experience.

Nurses on obstetrics perceived that they included patient teaching in their nursing care more regularly than did nurses on medicine and rehabilitation. Nurses between 30-44 years of age perceived a greater degree of success in patient teaching than did nurses under 30 years of age.

Differences in perceptions of change agent roles related to patient teaching factors. The last research question examined to what extent the perceptions of the change agent roles were related to such factors as self-perceived competence, importance and success in patient teaching. Because the nurses' responses to the patient teaching factors were fairly high, the data were analyzed by using the t-test procedure to determine the differences between the means of nurses with a lower and a higher perception of the patient teaching factors. A summary of the probabilities of statistically significant mean differences on actual and preferred frequencies of performing the teaching activities according to the patient teaching factors are presented in Table 35.

The largest number of statistically significant differences were found on the actual frequency of performing the teaching activities according to the patient teaching factors, perception of success in patient teaching, frequency of including patient teaching in nursing care, and satisfaction with current qualifications for the patient teaching role. For these three patient teaching factors, there were 34 (85.0 percent), 28 (70.0 percent), and 24 (60.0 percent) statistically significant differences, respectively, on the actual frequency of

Table 35

Summary of Probabilities of Significant Differences on Actual and Preferred Frequencies of Performing Teaching Activities by Patient Teaching Factors

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Catalyst							
2 Am able to judge the most opportune moment to teach.	A[1]	024				006	020
	S			016		015	
3 Stimulate patient's problem-solving ability.	A						039
4 Encourage patients to want to learn.	A		017				001
7 Encourage questions.	A		034				036
11 Help patients focus attention on accomplishing desired goals.	A		040		049	004	000
	S					001	
21 Encourage patients to make informed decisions.	A	049	013	036		006	011

Table 35 (continued)

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Catalyst (continued)							
29 Encourage patients to practice skills.	A			013		003	017
33 Encourage adopting behaviors that will improve health.	A		002	016		019	000
	S			047			
39 Provide written instructions to increase commitment.	A				001		
Process Helper							
1 Establish a helping relationship.	A		020		050	000	000
	S					006	
5 Validate learning needs with the patient.	A		012				001
	S			042		033	
9 Assist patients to identify learning needs.	A		013		014	006	000
	S			036		003	021
10 Assist patients to formulate long- and short-term goals.	A		002		000	010	000
	S					006	018

Table 35 (continued)

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Process Helper (continued)							
16 Consider the patient's readiness to learn before teaching.	A S	035					004 039
17 Ask patients their usual approach to solving problems.	A S				002 041	005	000 002
18 Actively involve patients in determining acceptable solutions.	A	026	048			008	002
25 Relate new learning to patient's past experiences.	A		004			006	004
34 Assist patients in evaluating their progress.	A		020	015		018	
38 Attempt to determine the reason(s) when learning has not occurred.	A S		009	022		000 045	000 035

Table 35 (continued)

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Solution Giver							
6 Am able to judge how much information a patient can "handle" or "needs to know."	A		014			025	018
8 Give appropriate professional advice.	A	044	037			037	017
	S			026		050	
12 Suggest solutions that have worked for others.	A					001	013
	S					008	
14 Give patients health care information.	A						027
15 Give meaningful information.	A					001	038
	S			007		001	
23 Patients and families rely on my information.	A					004	
24 Share health care information at a level patients can understand.	A	036		037		005	
28 Take initiative to correct inaccurate information.	A			007		003	029
	S			013		012	

Table 35 (continued)

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Solution Giver (continued)							
35 Identify alternative solutions.	A		010	044		009	009
	S						020
37 Am not afraid to admit "I don't know."	A						013
	S			046		024	
Resource Linker							
13 Suggest a variety of educational resource materials.	A				005		008
	S						041
20 Discuss resources within family and/or significant others.	A		003				017
22 Assist patients to identify support systems.	A		032		004		039
26 Use various sources to obtain current knowledge.	A		002			044	004

Table 35 (continued)

Teaching Activities		Preparation Effectiveness	Qualification Satisfaction	Perception (self)	Perception (others)	Frequency	Success Perception
Resource Linker (continued)							
27 Collaborate with other health professionals.	A		026			006	013
30 Encourage family participation.	A		015			001	000
31 Provide appropriate resources.	A		002	013	032	006	001
32 Help patients make personal application of information.	A		001			000	000
36 Identify appropriate community resources.	A		010			012	039
40 Refer patients to other helping professionals.	A					013	

[1] A represents actual performance; S represents preferred performance

performing the teaching activities. On the preferred frequency of performing the teaching activities, there were 7 (17.5 percent) statistically significant differences for the patient teaching factor, perception of success in patient teaching, and 12 (30.0 percent) for the factor, frequency of including patient teaching in nursing care.

For the patient teaching factors, effectiveness of nursing education preparation, importance of patient teaching as compared to other nursing activities, and importance of nurses teaching patients as perceived by other professionals, there were 6 (15.0 percent), 9 (22.5 percent), and 9 (22.5 percent) statistically significant differences, respectively, on the actual frequency of performing the teaching activities. There were 8 (20.0 percent) statistically significant differences on the preferred frequency of performing the teaching activities for the factor, importance of patient teaching as compared to other nursing activities.

The nurses who had a higher perception of the factors, self-perceived competence, importance and success in patient teaching, consistently indicated that they performed and/or should perform the teaching activities more frequently than did nurses who had a lower perception. The perceptions of how frequently nurses should perform the teaching activities, however, appeared to be influenced less by the nurses' perceptions of the patient teaching factors than was their actual performance.

The nurses' perceptions of the patient teaching factors appeared to have the greatest influence on the actual frequency of performing the following two teaching activities: encourage patients to make informed decisions, and provide patients with appropriate resources to enhance learning. Both teaching activities indicated statistically significant mean differences for five of the six patient teaching factors studied. Six of the personal and professional characteristics of nurses studied were associated with statistically significant mean differences on the actual frequency of performing the teaching activity, ***I provide patients with appropriate resources to enhance learning***. Four personal and professional characteristics of nurses were associated with statistically significant mean differences in the nurses' perceptions of how frequently they should encourage patients to make informed decisions.

Nurses were asked to comment on factors that they felt were important in increasing patient teaching effectiveness. A variety of suggestions were offered. A content analysis was conducted classifying and quantifying nurses' responses. The comments related to teacher-facilitator factors, educational process, methods, and support for teaching.

Conclusions

The findings of the study must be interpreted with caution because of the low response rate and the limited number of respondents within certain categories. The following conclusions are based on the findings of the data analysis:

1. Although their reports varied, nurses generally indicated that they performed the teaching activities within the preassigned roles of catalyst, process helper, solution giver, and resource linker fairly frequently.

2. The nurses consistently reported a discrepancy between their actual and preferred performance of the teaching activities. Their actual frequency of performing the teaching activities within the preassigned roles of catalyst, process helper, solution giver and resource linker were less frequent than they perceived they should be. The mean responses indicated that nurses perceived that they should perform all forty teaching activities between "most of the time" and "always."

3. The personal and professional characteristics of nurses that influenced the actual frequency of performing the teaching activities most directly were: the year nurses graduated with a Diploma in Nursing as their highest level of nursing education, years of experience as a registered nurse, present area of nursing practice, and years of patient teaching experience. A higher frequency of performing many of the teaching activities, particularly within the preassigned role of resource linker, was reported by nurses who had more experience in patient teaching, more experience as a registered nurse, and by those who graduated earlier with a Diploma in Nursing. This higher frequency reported was perhaps a result of being more familiar with the resources that were available. Age and nursing process in educational

programs had the greatest effect on the nurses' perceptions of how frequently they should perform the teaching activities.

4. Although the nurses' perceptions of such patient teaching factors as self-perceived competence, importance and success in patient teaching varied, their mean responses were fairly high. For instance, nurses rated patient teaching as moderately to extremely important in comparison to other nursing activities. They indicated that they included patient teaching in their nursing care and perceived that they were fairly successful. Generally they perceived that their nursing education was fairly effective in preparing them for patient teaching.

5. Many of the personal and professional characteristics of nurses examined appeared to have little impact on the nurses' perceptions of the patient teaching factors, self-perceived competence, importance and success in patient teaching. However, age, level of nursing education preparation, three content areas, present area of nursing practice, years in present area, and length of patient teaching experience, appeared to influence the nurses' perceptions of some of these patient teaching factors. For instance, nurses who had a baccalaureate degree in nursing and/or teaching/learning theory, problem-solving process and change theory in their education, perceived that they were prepared more effectively for their patient teaching role. Age, length of experience in present area of nursing practice, and length of patient teaching experience, appeared to be related positively to the nurses' satisfaction with their current qualifications for patient teaching.

6. The perceptions of nurses on obstetrics appeared to differ most from nurses in other areas. The nurses on obstetrics reportedly performed some of the teaching activities significantly more frequently. They perceived the importance of patient teaching as compared to other nursing activities to be greater. They perceived they included patient teaching in their nursing care more regularly. As indicated in the literature, obstetrics is generally considered a highly intensive area for patient education, and there was often a large degree of interest in education about health care.

7. The reported frequency of performing the teaching activities appeared to be positively related to such factors as perceptions of success in patient teaching, how regularly

nurses included patient teaching in their nursing care, and satisfaction with current qualifications for their patient teaching role. The frequency of performing the teaching activities appeared to be influenced to a much lesser extent by the factors, effectiveness of nursing education preparation for patient teaching and perceptions of the importance of patient teaching. Generally, the patient teaching factors examined appeared to influence the nurses actual performance more than did their perceptions of how frequently they should perform the teaching activities.

8. A content analysis of the open-ended question revealed that nurses most frequently reported that time and/or workload was a factor affecting patient teaching effectiveness. Since lack of time has been mentioned by nurses in other studies (Murdaugh, 1980) as a deterrent to integrating patient education into nursing practice, it cannot be ignored.

Implications

The data from this study resulted in some significant findings, although the study had some limitations. The use of more than one institution would have increased the generalizability of the findings. An increase in the number of subjects representing baccalaureate degree nurses, supervisors, and nurses in rehabilitation, would also have resulted in greater confidence in the interpretation of the results. If construct validity of the instrument had been demonstrated, data analysis could have been performed on the basis of four independent roles. In view of these limitations, suggestions concerning implications for nursing practice and education must be regarded cautiously.

1. Nurse educators should review their curricula to assess how they are preparing graduates to assume responsibility for patient education. They must continue to clarify the benefits of patient education. The findings of this study indicate that it is important to include teaching/learning theory and change theory in nursing education programs, and to give more attention to the teaching activities that were performed less frequently, for example,

asking patients what their usual approach is to solving problems. Clinical practica should integrate these concepts into patient care and teaching. Graduates should be expected to demonstrate proficiency in this teaching function.

2. Since the quality of their nursing education preparation and satisfaction with their current qualifications for patient teaching was reportedly variable, both preservice and inservice education are important in meeting the learning needs of registered nurses. Continuing staff-education programmes, group conferences, specially planned courses and library resource materials can be of great value in bringing the nurses' knowledge up-to-date and in developing educational skills. Staff involvement and attendance in such activities should be encouraged. The findings suggest that staff development programs should include change theory and the use of modern modes ~~of~~ material presentation. Only slightly more than one-third of the respondents reported that change theory was included in their education. Those nurses who did indicate the content was included perceived that their nursing education program prepared them more effectively for patient teaching than did those nurses who did not. The inclusion of change theory in their education appeared to have a positive effect on the perceived frequency that nurses performed 12.5 percent of the teaching activities.

3. If patient education is the responsibility of every nurse, the teaching function should be described in the nurses' job description and should be included as an integral part of training as well as an aspect of periodic performance appraisals.

4. It is evident from the findings that the actual frequencies of performing the tested teaching activities were lower than nurses perceived they should be. In an attempt to narrow the discrepancy, individual nurses should be encouraged to review their own practices and to set personal learning goals that would help them develop as patient educators.

5. In order to assure optimal effectiveness and identify weaknesses, it is necessary to document outcomes, have periodic reviews, and regular discussions of patient education at staff meetings. Information should be provided about resource materials that are currently available for use in patient education. Several nurses suggested the development of teaching

plans and guidelines that could provide a reference for the content knowledge in patient education.

6. If health care agencies are committed to patient education, it is important that nursing administration support patient education as a priority in nursing practice. A commitment which includes the acceptance and implementation of patient education as an integral component of total patient care, support from medical staff, adequate staffing, financial resources, and continuing education of staff, is essential if health care institutions are to fulfill a leadership role in patient education. To support the educational endeavor, effective patient education requires the resources of time and materials. Continuing evaluation of the cost effectiveness of patient education should be conducted.

7. To advance nursing practice, nurses should initiate feedback and become involved in research about the quality and effectiveness of patient education.

Implications For Research

The results of this study have implications for future research:

1. In this research, the frequency with which nurses performed the teaching activities were studied by selected personal and professional characteristics and by patient teaching factors. Future research could examine the interrelationships among various independent variables related to patient education, for example, age and educational content.

2. In future research of patient education, efforts must be directed at obtaining more rigorous assessments of the construct validity of the instrument used. Although the items were reflective of the change process in patient teaching, lack of construct validity indicated that the items were not reflective of the preassigned four roles of catalyst, process helper, solution giver and resource linker. This may suggest that further item revisions are required, or that the change agent roles are not discreet and are interactive entities. The teaching activity items that were found to be conceptually confounded may suggest revisions in this model or the examination of a different model in the study of patient education.

3. Future studies could consider employing direct observation, not retrospective self-reports. Woldum et al. (1985: 24) indicate that clinical research must focus

> on the individual nurse-patient interaction. Tape and video recordings, process recordings, and patient interviews by a third party during and after admissions will probably tell nurses more about the nature and effectiveness of their patient teaching than any other means.

4. To provide a comprehensive view, a study could be undertaken to examine the patient's perceptions of the roles that nurses should assume to enhance effective patient education.

5. It would be useful to examine the coordination and multidisciplinary activities, and to conduct a follow-up of patient education.

6. A future study could evaluate how community health nurses and others from out-of-hospital settings compare with nurses in hospitals in the roles they assume in patient education.

BIBLIOGRAPHY

Ackerman, A. M., Partridge, K. B., and Kalmer, H.
1981 "Effective integration of health education into baccalaureate nursing curriculum." Journal of Nursing Education, 20(2): 37-44.

Ackerman, A. M., Partridge, K. B., and Kalmer, H.
1982 "Nursing education in baccalaureate nursing curriculum: Myth or reality?" Journal of Nursing Education, 21(1): 15-22.

Bailey, B. J.
1983 "Using change theory to help the diabetic." The Diabetes Educator, Fall: 37-56.

Bartlett, E. E, and Manzella, B. A.
1985 Innovative Solutions to PPS: Focus on Patient Education. Birmingham: Patient Education Newsletter.

Becker, M. H., and Maiman, L. A.
1980 "Strategies for enhancing patient compliance." Journal of Community Health, 6: 113-135.

Becker, M. H., Maiman, L. A., Kirscht, J. P., Haefner, D. P., Drachman, R. H., and Taylor, D. W.
1979 Patient perceptions and compliance: Recent studies of the health belief model. In R. B. Haynes, D. W. Taylor, and D. L. Sackett (Eds.), Compliance in Health Care. Baltimore: The Johns Hopkins University Press.

Bernheimer, E.
1980 Working through the territorial imperative in a hospital setting. In W. D. Squyres (Ed.), Patient Education: An Inquiry into the State of the Art. New York: Springer Publishing Company.

Bille, D. A.
1983 "Process-oriented patient education." Dimensions of Critical Care Nursing, 2(2): 108-115.

Bille, D. A. (ed).
1981 Practical Approaches to Patient Teaching. Boston: Little, Brown and Company.

Borg, W. R., and Gall, M. D.
1983 Educational Research: An Introduction. 4th ed. New York: Longman.

Braak, L., and Cate, M.
1980 "Collaborative research promotes patient teaching." Nursing Administration Quarterly, 4(2): 97-100.

Brooten, D. A., Hayman, L. L., and Naylor, M. D.
1978 Leadership for Change: A Guide for the Frustrated Nurse. Toronto: J. B. Lippincott Company.

Caffarella, R. S.
1984 "The nurse's role in hospital based patient education programs for adults." The Journal of Continuing Education in Nursing, 15(6): 222-223.

Chaisson, G. M.
1980 "Patient education: Whose responsibility is it and who should be doing it?" Nursing Administration Quarterly, 4(2): 1-11.

Chang, B. L.
1980 "Evaluation of health care professionals in facilitating self-care: Review of the literature and a conceptual model." Advanced Nursing Science, 25: 43-58.

Chin, R., and Benne, K. D.
1976 General strategies for effecting changes in human systems. In W. G. Bennis, K. D. Benne, R. Chin, and K. E. Corey (eds.), The Planning of Change. Toronto: Holt, Rinehart & Winston.

Cobb-McMahon, B. A., Williams, D. D., and Davis, J. H.
1984 "Changing health behavior of community health clients." Journal of Community Health Nursing, 1(1): 27-31.

Cohen, S. A.
1981 "Patient education: A review of the literature." Journal of Advanced Nursing, 6(1): 11-18.

Conrad, P.
1985 "The meaning of medications: Another look at compliance." Social Science and Medicine, 20(1): 29-37.

Coutts, L. C., and Hardy, L. K.
1985 Teaching for Health: The Nurse as Health Educator. New York: Churchill Livingstone.

DeJoseph, J. F.
1980 Writing and evaluating educational protocols. In W. D. Squyres (Ed.), Patient Education: An Inquiry into the State of the Art. New York: Springer Publishing Company.

Devine, E. C., and Cook, T. D.
1983 "A meta-analytic analysis of effects of psychoeducational interventions on length of postsurgical hospital stay." Nursing Research, 32: 267-274.

DiMatteo, M. R., and DiNicola, D. D.
1982 Achieving Patient Compliance: The Psychology of the Medical Practitioner's Role. New York: Pergamon Press.

D'Onofrio, C. N.
1980 Patient compliance and patient education: Some fundamental issues. In W. D. Squyres (Ed.), Patient Education: An Inquiry into the State of the Art. New York: Springer Publishing Company.

Douglass, L. M., and Bevis, E. O.
1983 Nursing Management and Leadership in Action. 4th ed. Toronto: C. V. Mosby.

DuBrey, Sr. R. J.
1982 Promoting Wellness in Nursing Practice: A Step-by-Step Approach in Patient Education. Toronto: C. V. Mosby.

Elliott, D. J. V.
1986 The Process of Change: The Development and Implementation of a Teaching Program for Patients with a Chronic Illness. Unpublished doctoral dissertation, University of Alberta, Edmonton, Alberta.

Falvo, D. R.
1985 Effective Patient Education: A Guide to Increased Compliance. Rockville, Maryland: Aspen Systems Corporation.

Friedland, G. M.
1976 "Learning behaviours of a preadolescent with diabetes." American Journal of Nursing, 76: 59-61.

Friedman, H. S., and DiMatteo, M. R.
1982 Interpersonal issues in health care: Healing as an interpersonal process. In H. S. Friedman and M. R. DiMatteo (eds.), Interpersonal Issues in Health Care. Toronto: Academic Press.

Girouard, S.
1978 "The role of the clinical specialist as change agent: An experiment in preoperative teaching." International Journal of Nursing Studies, 15: 57-65.

Green, L. W.
1979 Educational strategies to improve compliance with therapeutic and preventive regimens: The recent evidence. In R. B. Haynes, D. W. Taylor, and D. L. Sackett, (ed.), Compliance in Health Care. Baltimore: The Johns Hopkins University Press.

Havelock, R. G.
1973 The Change Agent's Guide to Innovation in Education. Englewood Cliffs, N. J.: Educational Technology Publications.

Haynes, R. B., Taylor, D. W., and Sackett, D. L. (ed.)
1979 Compliance in Health Care. Baltimore: The Johns Hopkins University Press.

Hover, J.
1966 "Diploma vs. degree nurses: Are they alike?" Nursing Outlook, 23: 684-687.

Jenny, J.
1979 "A humanistic strategy for patient teaching." Health Values: Achieving High Level Wellness, 3(3): 175-180.

Jenny, J.
1978 "A strategy for patient teaching." Journal of Advanced Nursing, 3: 341-348.

Lancaster, J., and Lancaster, W. (ed.)
1982 Concepts for Advanced Nursing Practice: The Nurse as a Change Agent. Toronto: C. V. Mosby.

Lee, E. A., and Garvey, J. L.
1978 "How is inpatient education being managed?" In B. K. Redman (Ed.), Patient teaching, Nursing Digest, 6(1): 12-16.

Levin, L. S.
1978 "Patient education and self-care: How do they differ?" Nursing Outlook, 16: 170-175.

Levine, S., and Sorenson, J. R.
1984 Social and cultural factors in health promotion. In J. D. Matarazzo, S. M. Weiss, J. A. Herd, N. E., Miller, and S. M. Weiss (ed.), Behavioral Health: A Handbook of Health Enhancement and Disease Prevention. Toronto: John Wiley & Sons.

Lindeman, C. A., and Van Aernam, B.
1971 "Nursing intervention with the presurgical patient . . . the effects of structured and unstructured preoperative teaching." Nursing Research, 20: 319-332.

Lippitt, G., and Lippit, R.
1978 The Consulting Process in Action. LaJolla, California: University Associates, Inc.

Magill, K., Williams, S., and Caspi, A.
1986 "Patient education: progress and problems." Nursing Management, 17(2): 44-49.

Mathews, B. P., Mullen, P. D., and Mast, E. M.
1979 "Hospital-based health education: For patients, staff and the community." Health Values: Achieving High Level Wellness, 3(1): 32-41.

Mauksch, G., and Miller, M. H.
1981 Implementing Change in Nursing. Toronto: C. V. Mosby Company.

McCormick, R. D., and Gilson-Parkevich, T.
1979 Patient and Family Education, Tools, Techniques, and Theory. Toronto: John Wiley & Sons.

McCulloch, C., Boggs, B., and Varner, C.
1980 "Implementation of educational programs for patients." Nursing Administration Quarterly, 4(2): 61-65.

Minnick, A.
1982 Patient Teaching by Registered Nurses. Ann Arbor, Michigan: UMI Research Press.

Moses, E., and Roth, A.
1979 "Nursepower." American Journal of Nursing, 79: 1745-1756.

Mouly, G. J.
1978 Educational Research: The Art and Science of Investigation. Toronto: Allyn & Bacon.

Murdaugh, C. L.
1980 "Effects of nurses' knowledge of teaching-learning principles on knowledge of coronary care unit patients." Heart and Lung, 9(6): 1073-1078.

National Conference on Nurses for Community Service.
1973 Report of the CNA - National Health and Welfare Conference, Ottawa, November 13-16, 1973. Ottawa: The Canadian Nurses' Association.

Narrow, B. W.
1979 Patient Teaching in Nursing Practice: A Patient and Family-Centered Approach. Toronto: John Wiley & Sons.

Olson, E. M.
1979 "Strategies and techniques for the nurse change agent." The Nursing Clinics of North America, 14(2): 323-336.

Ottaway, R. N.
1983 "The change agent: A taxonomy in relation to the change process." Human Relations, 36(4): 361-392.

Palm, M. L.
1971 "Recognizing opportunities for informal patient teaching." Nursing Clinics of North America, 6: 669-678.

Pohl, M. L.
1968 Teaching Function of the Nursing Practitioner. Dubuque, Iowa: William C. Brown.

Pohl, M. L.
1965 "Teaching activities of the nursing practitioner." Nursing Research, 14: 4-11.

Polit, D. F., and Hungler, B. P.
1983 Nursing Research: Principles and Methods. Toronto: J. B. Lippincott Company.

Putt, A. M.
1970 "One experiment in nursing adults with peptic ulcers." Nursing Research, 19: 484-492.

Rankin, S. H., and Duffy, K. L.
1983 Patient Education: Issues, Principles, and Guidelines. Philadelphia: J. B. Lippincott Company.

Reading, A. E.
1979 "The short term effects of psychological preparation for surgery." Social Science and Medicine, 13A(6): 641-654.

Redman, B. K. (ed.).
1981 Issues and Concepts in Patient Education. New York: Appleton-Century-Crofts.

Redman, B. K.
1984 The Process of Patient Education. Toronto: C. V. Mosby Co.

Roberts, C. S.
1982 "Identifying the real patient problems." Nursing Clinics of North America, 17(3): 482.

Schmitt, F. E., and Wooldridge, P. J.
1973 "Psychological preparation of surgical patients." Nursing Research, 22: 108-115.

1983 SPSS X: Statistical Package for the Social Sciences. McGraw-Hill Book Co.

Steckel, S. B.
1982 Patient Contracting. Norwalk, Connecticut: Appleton-Century-Crofts.

Storch, J. L.
1980 "Consumer rights and health care." Nursing Administration Quarterly, 4(2): 107-115.

Strecher, V. J., DeVellis, B. M., Becker, M. H., and Rosenstock, I. M.
1986 "The role of self-efficacy in achieving health behavior change." Health Education Quarterly, 13(1): 73-91.

Tagliacozzo, D. M., Lieskin, D. B., Lashof, J. C., and Ima, K.
1974 "Nurse intervention and patient behavior: An experimental study." American Journal of Public Health, 64: 596-603.

Webb, M. R.
1983 The Change Agent in Nursing: A Study of Achievement in Women. Unpublished doctoral dissertation, University of Calgary, Calgary, Alberta.

Woldum, K. M., Ryan-Morrell, V., Towson, M. C., Bower, K. A., and Zander, K.
1985 Patient Education: Foundations of Practice. Rockville, Maryland: Aspen Systems Corporation.

APPENDIX A

INSTRUMENTATION

INSTRUMENT VALIDATION

EXPERT OPINION RATING

Listed below are four groups of questionnaire items relating to the four roles of catalyst, process helper, solution giver, and resource linker. A definition of the role precedes each group of items. Please note that both positive and negative statements are included.

Instructions

1. Below each item are two 8-point scales. The first scale is to rate the clarity of the item. The second is to rate if the item is in fact a measure of the process described in the definition, and will be referred to as the appropriateness of the item. Please circle the number which indicates your rating of the item.

   EXAMPLE:

   A. The item is not ambiguous or obscure but is clear in its meaning.

   NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

   B. The item is not irrelevant or unsuitable to the role category but is appropriate and reflective of the role.

   NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

2. In the space provided below the scale, please suggest clearer wording, if the item is not clear and suggest a more appropriate item, if the item is not appropriate in your judgment.

I. CATALYST

Definition - an individual who stimulates deliberate and conscious problem solving.

Items:

1. I feel that I just do not know what to teach.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

2. I have difficulty determining an incentive that is likely to motivate the patient at a particular time.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

3. I help to motivate patients to learn by helping them recognize the need.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

4. I encourage patients to ask questions about their care and treatment.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

5. I find there is a difference between the patient's identification of his problem and my identification of his problem.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

6. I stimulate the patient's problem-solving ability relative to his/her own health and capabilities.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

7. I encourage patients and families to seek information to become involved in making informed decisions.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

8. I encourage the patients to participate in planned learning activities.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

9. I explain to patients the consequences of not adhering to their plan of care.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

10. I try to persuade patients whose lifestyle needs to be changed, that they are capable of bringing about these changes.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

11. I focus the patient's attention toward accomplishing desired goals.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

12. I set up contracts with patients to increase their commitment to a plan.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

13. I remind patients that they should practice the new skills they have learned.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

14. I encourage patients to try alternative approaches when appropriate.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

15. I try to remedy the situation where teaching may be neglected because of overlapping roles with other health professionals (eg., physicians, dietitians).

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

16. I deliberately explore with patients their perceptions of their situation.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

II. PROCESS HELPER

Definition - an individual who helps in the process of problem-solving, that is, in recognizing and defining needs, diagnosing problem(s), setting objectives, acquiring relevant resources, selecting or devising solutions to the problem(s), implementing the solution selected, and evaluating the solution to determine if it satisfies the needs for which it was selected (Havelock, 1973).

Items:

1. I ask patients what their usual approach is to solving problems.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

2. I find that patients are passive learners.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

3. I establish a helping relationship which permits and encourages disclosure of patient-specific needs.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

4. I validate with patients the learning needs that I have identified.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

5. I assist the patients to identify their own learning needs.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

6. I utilize the patient-nurse evaluation of learning needs in setting long- and short-term goals.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

7. I actively involve patients in determining satisfactory solutions to their health problems.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

8. I specify a plan for implementation in the patient's chart before beginning patient teaching.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

9. I consider the patient's readiness and need to learn the particular knowledge or skill before I begin to teach.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

10. I teach what the patient wishes to know first; then I teach what it has been determined they need to know.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

11. I re-evaluate changes in learning needs.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

12. I assist the patients with immediate application of knowledge.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

13. I integrate patient teaching activities into daily nursing practice.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

14. I find that patients are discharged from the hospital without having had the opportunity to put learned information into practice.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

15. I discover only after I have carried out the teaching plan that the patients have not accepted the goals I believed to be important.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

16. I document and communicate to other nurses involved with care, the teaching that was implemented.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

17. I assist patients in evaluating progress toward their goals.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

18. I attempt to determine the reason(s) when learning has not occurred.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

19. I evaluate the need for further instruction and support from such resources as health care agencies, self-help groups.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

III. SOLUTION GIVER

Definition - an individual who has definite ideas and takes the initiative in suggesting solutions to the problem.

Items:

1. I find that my patient teaching efforts involve giving patients health care information.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

2. I find that patients and families rely on me to provide information to their questions.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

3. I suggest a new way of looking at the patient's problem when indicated.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

4. I give information to patients on the basis of their problems and needs as they present them.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

5. I share information with patients based on their anticipated or inferred learning needs.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

6. I take the initiative to clear up false information patients may have regarding their treatment and care.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

7. I suggest solutions that others have found to be effective in similar situations.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

8. I identify several alternatives along with their risks when suggesting a solution to a patient's problem.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

9. I initiate teaching within protocols developed jointly by medical and nursing professionals.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

10. I give patients information that is meaningful to their needs and lifestyle.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

11. I share health care information with the patient at a level he/she can understand.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

12. I communicate facts, ideas, and professional opinions in writing to patients and their families.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

13. I am fearful that patients will ask me questions which I cannot answer.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

14. I feel that patients think I am being vague in my teaching.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

15. I believe I am too vague with patients.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

16. I judge how much information a patient can "handle" or "needs to know."

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

17. I give appropriate professional advice to patients and families.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

IV. RESOURCE LINKER

Definition - an individual who "brings people together, who helps clients find and make the best use of resources inside and outside their own system" (Havelock, 1973: 9).

Items:

1. I use various sources to obtain current knowledge to plan and implement the teaching plan.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

2. I teach patients content with which I am comfortable.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

3. I organize my teaching to fit within time constraints.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

4. I, unintentionally, repeat teaching in an area just taught well by someone else.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

5. I try to build on the patient's accumulated life experiences to increase patient learning.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

6. I discuss with patients the resources they have within their family.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

7. I assist patients to identify support systems.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

8. I encourage family participation in the teaching plan before the patient leaves the hospital.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

9. I collaborate with other health professionals regarding a comprehensive teaching plan.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

10. I identify a variety of educational resource materials that patients may find useful in meeting their learning needs.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

11. I use appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

12. I help patients make personal application when audiovisual or reading materials are used.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

13. I coordinate referrals consistent with the teaching plan.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

14. I refer to other helping professionals those patients who require assistance with problems that fall within their area of expertise.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

15. I identify appropriate community resources in developing a plan of care for patients and their families.

NOT CLEAR 1 2 3 4 5 6 7 8 CLEAR

NOT APPROPRIATE 1 2 3 4 5 6 7 8 APPROPRIATE

Your concerns about the instrument and/or suggestions for improvement would be greatly appreciated.

QUESTIONNAIRE

University of Alberta
Edmonton

Department of Educational Administration
Faculty of Education

Canada T6G 2G5

7-104 Education Building North, Telephone (403) 432-5241

May 31, 1985

Dear Colleague:

I am writing to request your participation in a study I am conducting as a graduate student in the Department of Educational Administration at the University of Alberta.

The purpose of the study is to survey the actual and preferred roles of registered nurses in patient teaching. It is hoped that this study will elicit information which can be used to improve patient teaching effectiveness. All full-time registered nurses on your unit and patient teachers have been selected to participate.

The questionnaire should take twenty to thirty minutes to complete. Most questions can be answered by circling a number or by a few words. One question provides you with the scope to write a paragraph or two if you wish to do so. Your reply will be held in strictest confidence and the final report will not identify individual respondents nor the institution.

If possible, please complete the questionnaire within the next few days and return it through the University mail in the pre-addressed envelope provided.

At the end of the study, your unit will be provided with an abstract presenting the findings of the study. A copy of the completed study summary will be available in your hospital library.

Thank you very much for your assistance in this research. I am looking forward to receiving your responses.

Sincerely yours,

Sylvia Mryglod

A QUESTIONNAIRE
TO SURVEY NURSES' PATIENT TEACHING ROLES

Part I. Personal and Professional Data

Directions: Please complete Part I of the questionnaire by circling the appropriate number or providing the appropriate answer. Your responses will be kept confidential.

Computer Coding

_ _ _ 1
1 2 3 4

1. Your age is:

   1. under 25
   2. 25 - 29
   3. 30 - 34
   4. 35 - 39 5
   5. 40 - 44
   6. 45 - 49
   7. 50 and over

2. Please indicate all diplomas/degrees you presently hold and the year you graduated:

   1. Diploma in nursing in the year 19___. 6, 7
   2. BN/BScN in the year 19___. 8, 9
   3. Other (please specify):______________________. 10, 11

3. Please indicate which of the following content areas were included in your education: (circle all which apply)

   1. Interpersonal communication skills 12
   2. Teaching/learning theory 13
   3. Problem-solving process 14
   4. Nursing process 15
   5. Change theory 16

4. Total number of years you have worked as a Registered Nurse:

   1. less than 1 year
   2. 1 - 5 years
   3. 6 - 10 years
   4. 11 - 15 years 17
   5. 16 - 20 years
   6. over 20 years

Computer Coding

5. Your present position is:

    1. General staff nurse
    2. Unit supervisor
    3. Patient teacher 18
    4. Other (please specify): ____________________.

6. Length of time employed in present position:

    1. less than 1 year
    2. 1 - 3 years
    3. 4 - 6 years 19
    4. 7 - 10 years
    5. over 10 years

7. Your present area of nursing practice is:

    1. Medicine
    2. Surgery
    3. Obstetrics 20
    4. Rehabilitation

8. Length of experience in this area of nursing:

    1. less than 1 year
    2. 1 - 5 years
    3. 6 - 10 years
    4. 11 - 15 years 21
    5. 16 - 20 years
    6. over 20 years

9. Total number of years you have included patient teaching in your nursing care:

    1. less than 1 year
    2. 1 - 5 years
    3. 6 - 10 years
    4. 11 - 15 years 22
    5. 16 - 20 years
    6. over 20 years

Part II. Patient Teaching Activities

Directions: The following statements describe some typical teaching activities in which nurses engage with varying degrees of frequency. Please indicate how frequently you actually performed these activities during the last week you were working, and how frequently you think nurses should perform these activities, by circling the appropriate numbers.

The numbers of the scale correspond to the following ratings:

1. Never
2. Infrequently
3. Some of the time
4. Most of the time
5. Always

To ensure that the results of this study are as accurate as possible, it is essential that you respond to every statement.

Example:

I acknowledge what patients already know.	Actual	1	2	3	(4)	5
	Should	1	2	3	4	(5)

(Using the key provided, the number circled indicates that during the past week of work, most of the time the respondent acknowledged what patients knew, however, she/he thinks nurses should always acknowledge what patients know.)

Teaching Activities:	How frequently?						Computer Coding
1. I establish a helping relationship with patients in their learning.	Actual	1	2	3	4	5	23
	Should	1	2	3	4	5	24
2. I am able to judge the most opportune moment to teach patients and families.	Actual	1	2	3	4	5	25
	Should	1	2	3	4	5	26
3. I stimulate the patient's problem-solving ability according to his/her own health and capabilities.	Actual	1	2	3	4	5	27
	Should	1	2	3	4	5	28
4. I encourage patients to want to learn.	Actual	1	2	3	4	5	29
	Should	1	2	3	4	5	30
5. I validate with the patient the learning needs that I have identified.	Actual	1	2	3	4	5	31
	Should	1	2	3	4	5	32
6. I am able to judge how much information a patient can "handle" or "needs to know."	Actual	1	2	3	4	5	33
	Should	1	2	3	4	5	34
7. I encourage patients to ask questions about their care and treatment.	Actual	1	2	3	4	5	35
	Should	1	2	3	4	5	36
8. I give appropriate professional advice to patients and families.	Actual	1	2	3	4	5	37
	Should	1	2	3	4	5	38

Response Key: 1. Never; 2. Infrequently; 3. Some of the time;
4. Most of the time; 5. Always

		How frequently?						Computer Coding
9.	I assist patients to identify their own learning needs.	Actual	1	2	3	4	5	39
		Should	1	2	3	4	5	40
10.	I assist patients to formulate long- and short-term goals appropriate to their learning needs.	Actual	1	2	3	4	5	41
		Should	1	2	3	4	5	42
11.	I help patients focus their attention on accomplishing desired goals.	Actual	1	2	3	4	5	43
		Should	1	2	3	4	5	44
12.	I suggest solutions that have worked for others in similar situations.	Actual	1	2	3	4	5	45
		Should	1	2	3	4	5	46
13.	I suggest a variety of educational resource materials that patients may find useful in meeting their learning needs.	Actual	1	2	3	4	5	47
		Should	1	2	3	4	5	48
14.	I find that my teaching effort consists of giving patients health care information.	Actual	1	2	3	4	5	49
		Should	1	2	3	4	5	50
15.	I give patients information that is meaningful to them.	Actual	1	2	3	4	5	51
		Should	1	2	3	4	5	52
16.	I consider the patient's readiness to learn the particular knowledge or skill before I begin to teach.	Actual	1	2	3	4	5	53
		Should	1	2	3	4	5	54
17.	I ask patients what their usual approach is to solving problems.	Actual	1	2	3	4	5	55
		Should	1	2	3	4	5	56
18.	I actively involve patients in determining acceptable solutions to their health problems.	Actual	1	2	3	4	5	57
		Should	1	2	3	4	5	58
19.	I explain to patients the importance of adhering to the care planned for them.	Actual	1	2	3	4	5	59
		Should	1	2	3	4	5	60
20.	I discuss with patients the resources they have within their family and/or significant others.	Actual	1	2	3	4	5	61
		Should	1	2	3	4	5	62
21.	I encourage patients to seek information in making informed decisions.	Actual	1	2	3	4	5	63
		Should	1	2	3	4	5	64

Response Key: 1. Never; 2. Infrequently; 3. Some of the time; 4. Most of the time; 5. Always

		How frequently?						Computer Coding
22.	I assist patients to identify support systems.	Actual	1	2	3	4	5	65
		Should	1	2	3	4	5	66
23.	I find that patients and families rely on me to provide information to their questions.	Actual	1	2	3	4	5	67
		Should	1	2	3	4	5	68
24.	I share health care information with patients and families at a level they can understand.	Actual	1	2	3	4	5	69
		Should	1	2	3	4	5	70
25.	I relate new learning to the patient's past experiences.	Actual	1	2	3	4	5	71
		Should	1	2	3	4	5	72
26.	I use various sources to obtain current knowledge to plan and implement my teaching.	Actual	1	2	3	4	5	73
		Should	1	2	3	4	5	74
27.	I collaborate with other health professionals when developing a comprehensive teaching plan.	Actual	1	2	3	4	5	75
		Should	1	2	3	4	5	76
28.	I take the initiative to correct inaccurate information patients may have regarding their treatment and care.	Actual	1	2	3	4	5	77
		Should	1	2	3	4	5	78
								$\overline{1}\ \overline{2}\ \overline{3}\ \frac{2}{4}$
29.	I encourage patients to practice with my assistance, the skills they are learning.	Actual	1	2	3	4	5	5
		Should	1	2	3	4	5	6
30.	I encourage family participation in the teaching plan.	Actual	1	2	3	4	5	7
		Should	1	2	3	4	5	8
31.	I provide patients with appropriate resources (eg., audiovisual aids, pamphlets) to enhance learning.	Actual	1	2	3	4	5	9
		Should	1	2	3	4	5	10
32.	I help patients make personal application of information when audiovisual or reading materials are used.	Actual	1	2	3	4	5	11
		Should	1	2	3	4	5	12
33.	I encourage patients to adopt behaviors which will improve their health.	Actual	1	2	3	4	5	13
		Should	1	2	3	4	5	14

Response Key: 1. Never; 2. Infrequently; 3. Some of the time;
4. Most of the time; 5. Always

		How frequently?					Computer Coding
34. I assist patients in evaluating the progress they are making toward achieving their goals.	Actual	1	2	3	4	5	15
	Should	1	2	3	4	5	16
35. I identify alternative solutions when helping a patient with a health problem.	Actual	1	2	3	4	5	17
	Should	1	2	3	4	5	18
36. I identify appropriate community resources in developing a teaching plan for patients and their families.	Actual	1	2	3	4	5	19
	Should	1	2	3	4	5	20
37. I am not afraid to admit "I don't know" in answering a question.	Actual	1	2	3	4	5	21
	Should	1	2	3	4	5	22
38. I attempt to determine the reason(s) when learning has not occurred.	Actual	1	2	3	4	5	23
	Should	1	2	3	4	5	24
39. I provide written instructions for patients to follow to increase their commitment.	Actual	1	2	3	4	5	25
	Should	1	2	3	4	5	26
40. I refer to other helping professionals those patients who require assistance with problems that fall within their area of expertise.	Actual	1	2	3	4	5	27
	Should	1	2	3	4	5	28

Part III. Patient Teaching Factors

Directions: Please respond to the following questions as they apply to you in your current position by circling one number below each question most closely representing your view.

1. How effectively did your nursing education program prepare you for patient teaching?

Not at all				Extremely effective	
1	2	3	4	5	29

2. To what extent are you satisfied with your current qualifications for your role in patient teaching?

Not at all				Extremely satisfied	
1	2	3	4	5	30

Computer Coding

3. How do you rate the importance of patient teaching as compared to other nursing activities?

Not important Extremely important

1 2 3 4 5 31

4. How do you rate the importance that other professionals (physicians, nursing administrators, other nurses) give to nurses' teaching patients and families?

Not important Extremely important 32

1 2 3 4 5

5. In your present position, how regularly do you include patient teaching in your nursing care?

Not at all All of the time

1 2 3 4 5 33

6. How successful do you view yourself in patient teaching?

Not at all Extremely successful

1 2 3 4 5 34

7. Please comment on any factors that you feel are important in increasing patient teaching effectiveness.

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY.

University of Alberta
Edmonton

Department of Educational Administration
Faculty of Education

Canada T6G 2G5

7-104 Education Building North, Telephone (403) 432-5241

June 11, 1985

Dear Colleague:

Last week you received a questionnaire surveying the roles of the nurse as a patient teacher. Because the responses are anonymous, I have no way of knowing whether or not you have responded. I wish to convey my thanks to those who have responded so promptly.

I would sincerely appreciate a response from those of you who have not yet completed the questionnaire. Please take a few minutes now to complete the questionnaire, and return it in the envelope that was provided. Your participation will provide valuable information for the overall findings, and is vital to the success of the study. If you have lost or misplaced the original questionnaire, a replacement can be obtained from your unit supervisor or by contacting me on campus at 432-4913.

Thank you again for your participation in the study.

Sincerely yours,

Sylvia Mryglod,
Graduate Student

APPENDIX B

FACTOR ANALYSIS RESULTS

Varimax Rotated Factor Matrix on Preferred Frequency of Teaching Activities

Item Number	Factor 1	Factor 2	Factor 3	Factor 4
1	.80181			
2	.49434			.46221
3	.55403		.46417	.43607
4	.71816			
5	.44886		.54517	
6				.61617
7	.61508			
8	.69836			
9	.44115	.42012	.42076	
10	.41087		.41368	
11	.64931			
12			.80940	
13		.58289		.47683
14			.45986	
15	.57928			
17		.68750	.42125	
18			.43684	
19				.57678
20		.61087		
21	.49349	.45190		
22		.77392		
23				.46575
24	.58908			
25			.81174	
26				.63104
27		.60954		
28	.55170			
29	.63448			
31		.82174		
32		.71321		
33		.52228		
34	.48123	.53021		.42114
35	.59269	.43729		
36	.41802	.51718		
37	.60249			
38	.51457	.47217		
39		.66152		
40		.42553		